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GovSU/SWRCB

January 20, 2006

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Ms. Selica Potter
Acting Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

RE: Comments for the January 31, 2006 State Water Resources Control Board Workshop on Salinity

Dear Ms. Potter,

The Kern County Water Agency (Agency) is pleased to provide comments to the State Water Resources Control Board (Board) in preparation for the January 31, 2006 workshop on salinity issues in the Central Valley. Kern County is well-known for its water management activities. In fact, the Agency has been a leader in studying surface and groundwater quality in Kern County.

The Agency has not witnessed salinity issues within Kern County with respect to groundwater degradation. In fact, salinity conditions have probably been improving as a result of the large-scale groundwater banking operations in Kern County. These facilities have allowed Kern County to effectively utilize water from several surface sources, including the Kern River, the State Water Project and the Friant-Kern Canal. Generally, the Kern River and Friant-Kern water supplies have lower salinity levels than local groundwater resulting in an overall salinity improvement.

All of the groundwater banking projects in Kern County are governed by Memoranda of Understanding (MOU). The MOUs contain a provision that requires local districts to manage their banking projects to reduce groundwater salinity. I have attached Chapter 5 of the 2001 Kern Fan Area Operations and Monitoring Report. This report was prepared by the Agency for the Kern Fan Monitoring Committee; Chapter 5 summarizes salt loads and balances for recent years. Based on our experience and study, the Agency recommends the Board recognize that local conditions in Kern County are such that state regulation of groundwater salinity is unnecessary. Agency staff will provide additional information regarding Kern County's salinity management and groundwater salinity conditions at the January 31, 2006 Board workshop.

If you have any questions, feel free to call Lloyd Fryer of my staff at (661) 634-1446.

661/634-1400

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3200 Rio Mirada Dr.
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2001 Kern Fan Area
Operations and Monitoring Report

Kern Fan Monitoring Committee

April 2005

Mark Mulkay
Chairman

Jon Parker
Vice Chairman

Bruce Hodges
Treasurer

Prepared under the direction of Rick Iger - Kern County Water Agency
Engineering and Operations Manager
Ken Schmidt - Consulting Hydrogeologist

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Kane Totzke - KCWA Environmental Specialist

WATER QUALITY

Water quality was determined in monitor wells, recovery wells, and canals both prior to 2001 and during recovery operations in 2001. This data is evaluated and summarized with maps and hydrographs. In addition, a comparison of the average concentrations of total dissolved salts (TDS) in the recharge water and the recovered water is provided. Finally, changes in water quality in the California Aqueduct which resulted from the 2001 recovery program are reviewed.

Sampling Programs

Groundwater Quality Monitoring Program - The semi-annual Groundwater Quality Monitoring Program was completed in August 2001. 80 monitor wells were sampled using the MB91-A Purge Pump Unit. Five casing volumes were pumped and measurements for Specific Electrical Conductivity, pH, and temperature were taken prior to sampling each well. Concentrations of various constituents were determined including gross alpha activity, uranium, DBCP, EDB, nitrate, and irrigation suitability analyses. The results from the water quality sampling were used to construct a map identifying groundwater quality problem areas and also to generate water quality hydrographs for some of the wells.

Recovery Well Sampling - Water samples were taken for Title 22 drinking water analyses on each of the 115 recovery wells used during the recovery program. Approximately 80 constituents were included in the initial Title 22 analyses shown on the Table from the Department of Health Services in Appendix D. Also, a modified version of the Title 22, approximately 45 constituents, was completed after start-up for each well. In all cases, the wells were sampled and the resultant data was reviewed prior to deliveries into the CVC, KWB Canal or Kern River Canal. This data was used to model potential changes recovery program deliveries might have on the California Aqueduct and Cross Valley Canal.

Aqueduct and Canal Sampling - The Kern Water Bank Canal and the Cross Valley Canal were sampled pursuant to the "Interim Department of Water Resources Water Quality Criteria For Acceptance Of Non-Project Water Into The State Water Project, March 1, 2001," in Appendix D. Samples were collected at the outset of the program in March and then one quarter later in June. The samples were analyzed for gross alpha count, arsenic, bromide, hexavalent chromium, nitrate, sulfate, TDS, and uranium. The Department of Water Resources also monitored water quality in the California Aqueduct upstream and downstream of recovery program delivery points. Samples were collected once or twice a month and analyzed for arsenic, bromide, hexavalent chromium, dissolved organic carbon, nitrate, sulfate, and TDS. (Water quality samples were also taken from the Buena Vista Aquatic Lakes and Buena Vista Pump Facility #7, but these facilities were not used to deliver recovered water to the California Aqueduct.) This data was used to validate recovery program modeling and evaluate recovery program impacts. The results of these sampling events are summarized in the last table in Chapter 5C.

Data Evaluation

Groundwater Quality Areas of Concern (AOC) Map - Chapter 5A contains a map showing identified AOCs, modified from the last report. An AOC represents an area where the concentration of a particular constituent approaches or exceeds a Maximum Contaminant Level (MCL). Groundwater quality maps prepared by the Kern Water Bank Authority (KWBA) in January 2001 were most useful in revising this map. These maps summarize historical ranges in concentrations of selected constituents in water from shallow and deep monitor wells and water bank project recovery wells. Several important changes have been made to the previous map. First, TDS has been added. here are two areas of relatively high TDS concentrations, compared to the recommended MCL of 500 mg/l. The largest is beneath the west edge of the study area near Elk Hills. TDS concentrations generally exceed 700 mg/l in shallow groundwater in

this area. For deep wells, TDS concentrations in this area exceed about 500 mg/l. Much higher TDS concentrations are indicated to be present beneath part of the Elk Hills. High sulfate concentrations are also generally present in this high TDS area, and the source of these constituents is likely groundwater inflow from the west. Sulfate concentrations are higher in the deeper groundwater in this area, and exceed 200 mg/l, compared to the recommended MCL of 250 mg/l. Marine deposits are present to the west and contribute both TDS and sulfate to the groundwater. In addition, past disposal of oil field brines in part of the Elk Hills west of the California Aqueduct (Aqueduct) has contributed TDS, chloride, and other constituents to groundwater in this area. TDS concentrations have exceeded 3,000 mg/l in shallow groundwater near a former brine pond. A second area of relatively high TDS is in a localized area near the tank farm in the KWB recharge area east of Enos Lane, about two miles south of Stockdale Highway. TDS concentrations exceeding 3,300 mg/l have been found in water from a shallow monitor well in this localized area. TDS concentrations in water from two recovery wells in the tank farm vicinity that tap groundwater from both shallow and deep strata are about 500 mg/l, and are elevated compared to other more distant wells in the area.

Arsenic concentrations exceeding 50 ppb (the presently applicable MCL) are present in both shallow and deep groundwater in the south part of the identified high-arsenic area. A smaller area of high arsenic concentrations is present in groundwater near Elk Hills, generally in the area where relatively high TDS groundwater is present.

Available data for uranium indicate that it is present at higher concentrations in the shallow groundwater and is usually present at low concentrations in the deep groundwater.

The boundaries of the AOC areas for DBCP and nitrate that were shown on the previous map have not been revised, primarily because of a lack of private well sampling data in the area north of the water banking project recharge sites along the Kern River. Nitrate concentrations in water from most of the water bank project recovery wells are less than 20 mg/l, well below the MCL of 45 mg/l.

The fluoride AOC is entirely southeast of the Kern River, and primarily southwest of I-5. Much of this area is in the western part of the Kern Delta Water District, south of Taft Highway. Fluoride concentrations exceeding the MCL of 1.4 mg/l appear to be associated with fine-grained deposits associated with the old lake beds. Fluoride concentrations in water from most of the water bank project recovery wells are well below the MCL.

In general there have been no verifiable detections of trace organic constituents in the recovery wells.

Water Quality Hydrographs - Water quality hydrographs were prepared for selected chemical constituents, including TDS, alpha activity, nitrate, and arsenic. Time trends in constituent concentrations were particularly evaluated in terms of influences of the recharge and recovery well pumping for the Kern Fan water banking projects. There were a number of indications of improvements in groundwater quality due to recharge of good quality water, particularly for shallow monitor wells in or near recharge areas. TDS is of interest because of the desire to maintain a salt balance, and as a water quality criterion. Nitrate, TDS, and uranium concentrations are generally higher in the shallow groundwater in areas distant from the recharge areas. Arsenic concentrations have become more important because of the lowering of the MCL, and are generally higher in the deep groundwater.

Monitoring results for numerous cluster monitor wells were used in this evaluation for several reasons. First, substantial sampling results are available for some of these wells prior to 1995, based on sampling by the California Department of Water Resources. Second, more frequent water quality analyses are available for these monitor wells than for the individual recovery wells. Lastly, the monitor wells tap groundwater

in particular depth intervals in the subsurface.

The first water quality hydrograph in Chapter 5B shows TDS trends in a number of shallow monitor wells. Decreases in TDS concentrations are apparent following large-scale recharge for Wells T30S/R24E-13D1, and T30S/R25E-4J2. Well 13D1 is near the west edge of the KWB recharge area, where records indicate that about 20,000 acre-feet of water were recharged in 1996-97 and 67,000 acre-feet in 1998 in the West Ponds. Well 4J2 is located near the north edge of the KWB North Ponds, where records indicate that about 40,000 acre-feet of water were recharged in 1996-97 and 25,000 acre-feet in 1998. These TDS decreases were almost 200 mg/l between 1994 and 1998.

The TDS hydrographs indicated an increase in TDS concentrations in water from some shallow monitor wells in 2000-2001. Included were Wells T30S/R24E-13D1, T30S/R25E-4J2, T30S/R25E-7A2, T30S/R25E-16L1, T30S/R26E-6L1, T30S/R26E-28J1, and T30S/R26E-32N1. Wells 13D1 and 4J2 were in areas of recovery well pumping at the KWB lands during 2001. Well 28J1 is in the vicinity of the KWB James K Ponds, and also in an area of significant recovery well pumping in 2001. The temporary TDS increase in water from Well 13D1 was almost 350 mg/l, and the TDS concentrations in water from this well decreased after recovery well pumping stopped. The temporary TDS increase in water from Well 4J2 was about 150 mg/l. The temporary TDS increase in water from Well 28J1 was about 180 mg/l, and then the TDS decreased after pumping stopped.

The second water quality hydrograph in Chapter 5B shows nitrate concentrations for shallow monitor wells. Nitrate concentrations in water from Well T30S/R25E-4J2 decreased from about 35 to 45 mg/l during 1993-95 to about 12 mg/l in 1999. After recharge activities stopped, and recovery began, nitrate concentrations in water from this well increased slightly. Nitrate concentrations in water from Well T30S/R25E-16L were less than the 2 mg/l during 1991-94, and increased to about 20 mg/l by early 1999. Following 1999, nitrate concentrations in water from this well rapidly decreased. Nitrate trends for Well T30S/R24E-13D1 are generally similar to those for Well T30S/R25E-4J2. That is, nitrate concentrations decreased through about 1998 and then rose during 2000-2001. In the area north of well 4J2, high nitrate concentrations were indicated to be present in shallow groundwater by the results of the West Bakersfield toxics study. The nitrate concentrations in water from shallow Well T30S/R26E-16B1 increased during recovery pumping in 1993, from about 5 mg/l to 15 mg/l, then decreased after recovery pumping stopped to the previous range of concentrations.

The third water quality hydrograph in Chapter 5B shows arsenic concentrations in water from selected deep monitor wells. Arsenic concentrations in water from Well T30S/R25E-16L3 were very low prior to some recovery pumping in 1993. Arsenic concentrations in water from this well increased to over 20 ppb by 1994. There were notable decreases in arsenic concentrations in water from Wells T30S/R25E-4J4 and T30S/R25E-16L3 after 1994 and through early 1998. Arsenic conditions in water from Well T30S/R26E-32N3 decreased after 1997. Arsenic concentrations in water from Well T30S/R25E-22R3 generally increased slightly after 1998 and early 1999. Arsenic concentrations in water from a number of deep wells stayed relatively constant during the period of record.

The fourth water quality hydrograph in Chapter 5C is for alpha activity in water from three monitor wells. Alpha activity is an indicator of uranium activities in the groundwater of the Kern fan area. Well T30S/R24E-13D1 is located in an area where the shallow groundwater has alpha activity exceeding the MCL of 15 picocuries per liter for public water supplies. Alpha activity in water from this well averaged about 50 picocuries per liter, and the long-term trend was a relative constancy for alpha activity. The lowest value was in 1999 and the highest value was in 2001. Alpha activity in water from well T30S/R26E-32N1 have also been relatively stable, and well below the MCL. Such activity is considered typical of much of the Kern Fan area, where low uranium activity is present. Alpha activity in water from

Well T30S/R26E-28J1 was generally below the MCL prior to 2000, but increased significantly after 1999, to about 55 picocuries per liter, or near the average value for water from Well T30S/R24E-13D1.

Salt Balance - One of the mandates of the KWB MOU is that "each project within the Kern Fan Area should be operated with the objective that the average concentration of TDS in the recovered water will exceed the average concentration of TDS in the recharged water..." Chapter 5D shows that the TDS of the water recovered from the projects exceeded the TDS of recharged water in all cases, as shown in Figure 5D-1. On the average, the ratio of TDS in water recovered to that recharged was 1.8:1. Thus each project easily met this water quality mandate of the KWB MOU. In addition, the TDS of the water recharged in each of the Kern Fan projects since they began operation and the TDS of the water recovered during the 2001 recovery program is documented in Chapter 5D.

The procedure used by the Kern Fan Monitoring Committee for evaluation of salt load imported to basin is as follows. Gross quantities of water delivered for recharge from the State Water Project (SWP), Friant-Kern Canal (FK), and the Kern River (KR) were tabulated on a monthly basis for each of the following projects – Berrenda Mesa Project, City of Bakersfield 2800 Acres, KWB, Pioneer Property, and the Kern River Channel. The monthly recharge quantities were compiled from Kern County Water Agency (KCWA) records.

The TDS in mg/l for SWP water was assumed to be as set forth in Table 32 of the State Water Project Operations Data published monthly by the State of California. The TDS for FK water was calculated to be an average of 43 mg/l for the year based on 10 samples collected by KCWA between November 1994 and February 2002 (samples ranged from 19 mg/l to 112 mg/l). Data were insufficient to determine monthly values. The TDS of KR water was calculated to an average of 84 mg/l for the year based on 52 samples collected by KCWA and Olcese Water District between March 1990 and September 1997 (samples ranged from 38 mg/l to 148 mg/l).

Total salt load (tons) was then calculated on a monthly basis and summed on an annual basis for each water source and project.

Recovery Program Water Quality Evaluations - The Department of Water Resources (DWR), downstream stakeholders in the Aqueduct, and Kern County banking interests developed water quality guidelines under which banked groundwater can be introduced into the Aqueduct (Appendix D "Interim Department of Water Resources Water Quality Criteria for Acceptance of Non-Project Water into the State Water Project, March 1, 2001"). In essence, these guidelines require that introduced water must not lower Aqueduct quality unless impacts are mitigated. In all cases, drinking water standards must be met. The guidelines identified constituents present in some Kern County groundwater at levels suspected to be higher than the Aqueduct water (e.g. arsenic, nitrate, uranium or chromium) and others that were expected to be less than background which would also provide a benefit to downstream contractors (e.g. bromide, organic carbon, and TDS).

During this first year of large-scale recovery, the banking programs had to predict expected water quality changes for these constituents in the Aqueduct throughout Kern County on a daily basis. This was accomplished using extensive data from well testing, flow rates of individual wells and turnouts throughout the Aqueduct system, and a blending model. The canal sampling which was conducted during the program was then used to validate the results of the blending model as shown on Table 5C-2 "Constituents of Concern Sampling". Overall, the sampling validated the model results summarized in Table 5C-1 "Pump-in Program Blending Calculations".

At the conclusion of the recovery program, the Department of Water Resources prepared a report summarizing the effects of the program on water quality in the Aqueduct (see Appendix E). They concluded that "While some constituents-of-concern were slightly elevated in the Aqueduct by pump-ins, others were reduced." In general, TDS and organic carbon decreased. (Organic carbon in itself is not a regulated constituent, but decreased organic carbon reduces the formation of undesirable disinfection byproducts.) Nitrate and sulfate increased slightly. Arsenic either showed no change or increased slightly. In all cases these constituents were well below drinking water MCLs. It is important to place the above changes (or lack thereof) in proper context; overall, background water quality in the Aqueduct was very good in 2001. In more typical dry years, the beneficial effect of recovery programs will be greater.

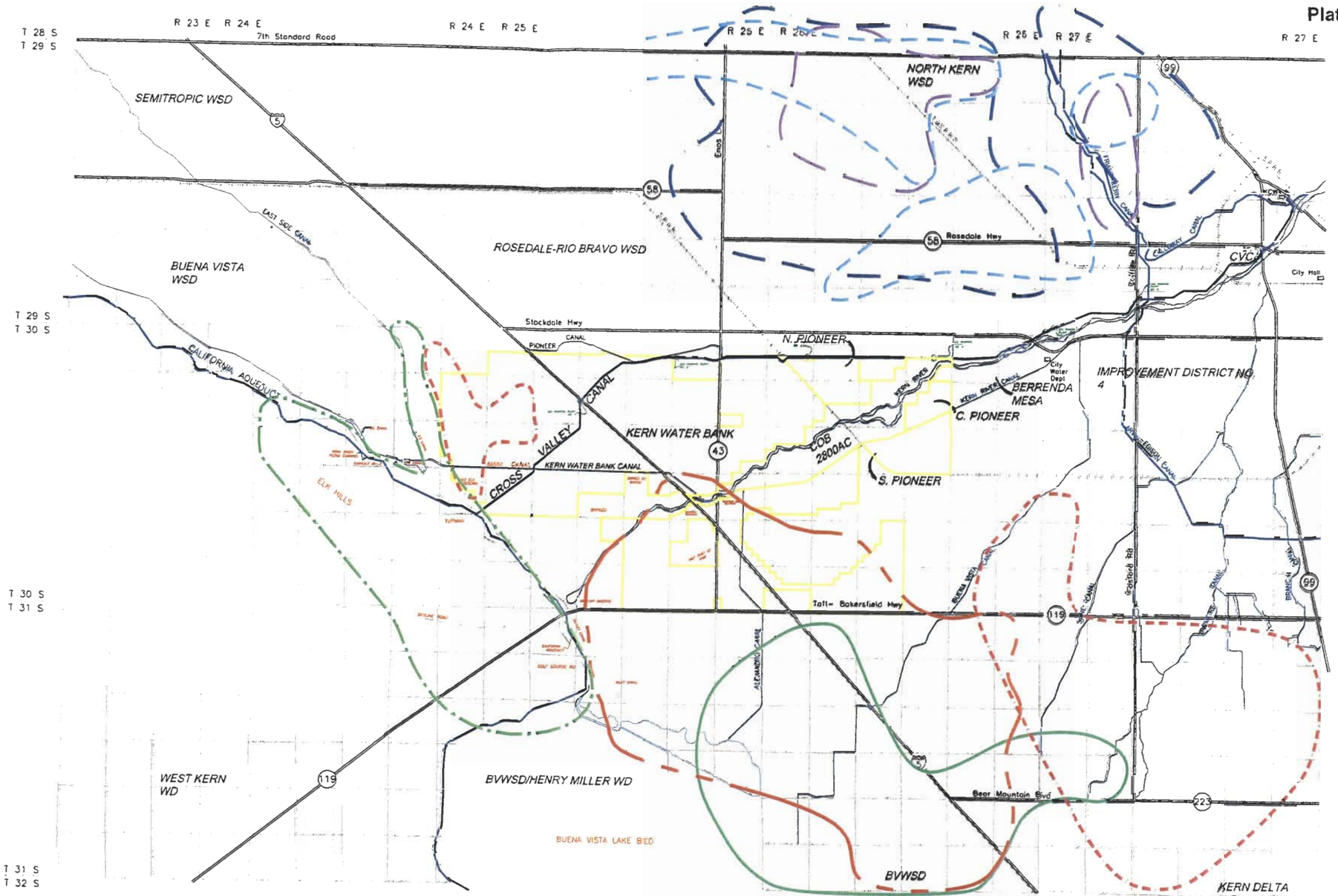
CHAPTER 5 LIST OF FIGURES

CHAPTER 5 LIST OF PLATES

CHAPTER 5 LIST OF TABLES

CHAPTER 5
SECTION A

GROUNDWATER QUALITY AREAS OF CONCERN MAP



F > 1.4 mg/l
As > 50 ug/l
EDB > 0.02 ppb
NO3 > 40 mg/l
Uranium > 20 pCi/L
DBCP > 0.2 ppb
TDS > 500 mg/l

** Interpretation by K.D. Schmidt
Boundaries show problems in same depth intervals (usually shallow, except for As)

PROJECT AREA

VICINITY MAP

Miles
0 1 2 3 4

NOT TO SCALE

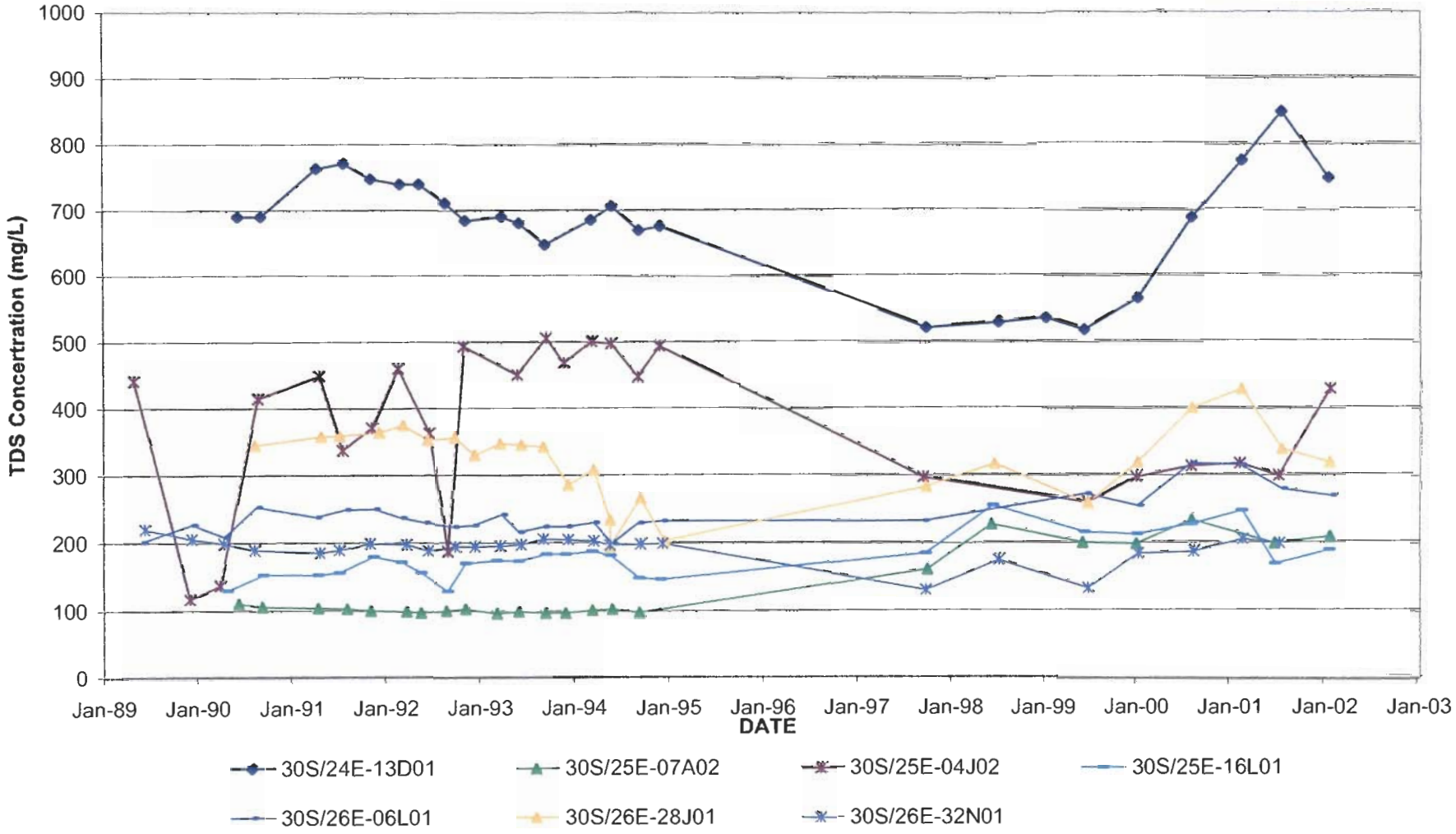
Kern Fan Monitoring Committee
Kern County, California

KERN FAN AREA
WATER QUALITY AREA OF CONCERN MAP

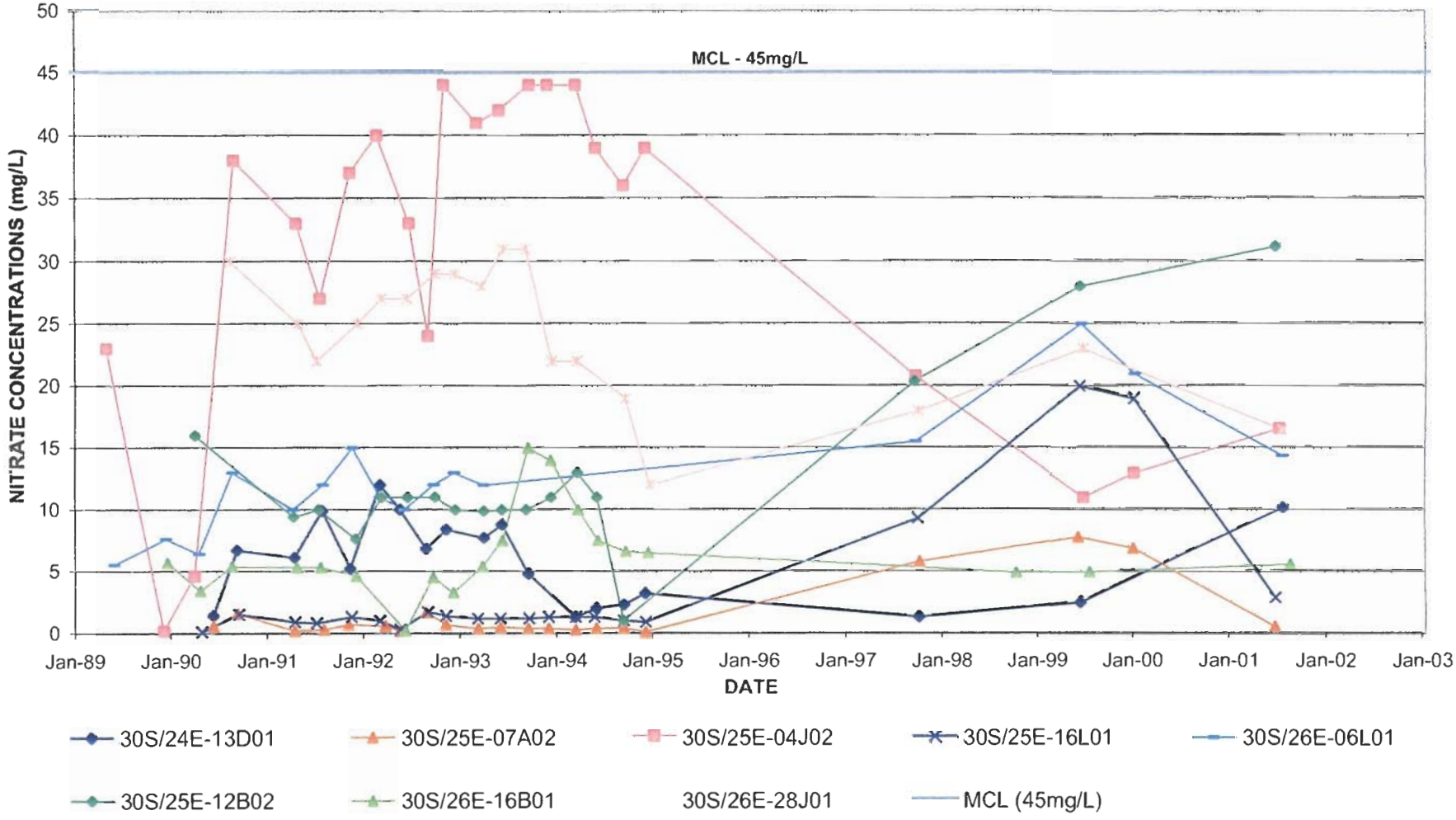
CHAPTER 5
SECTION B

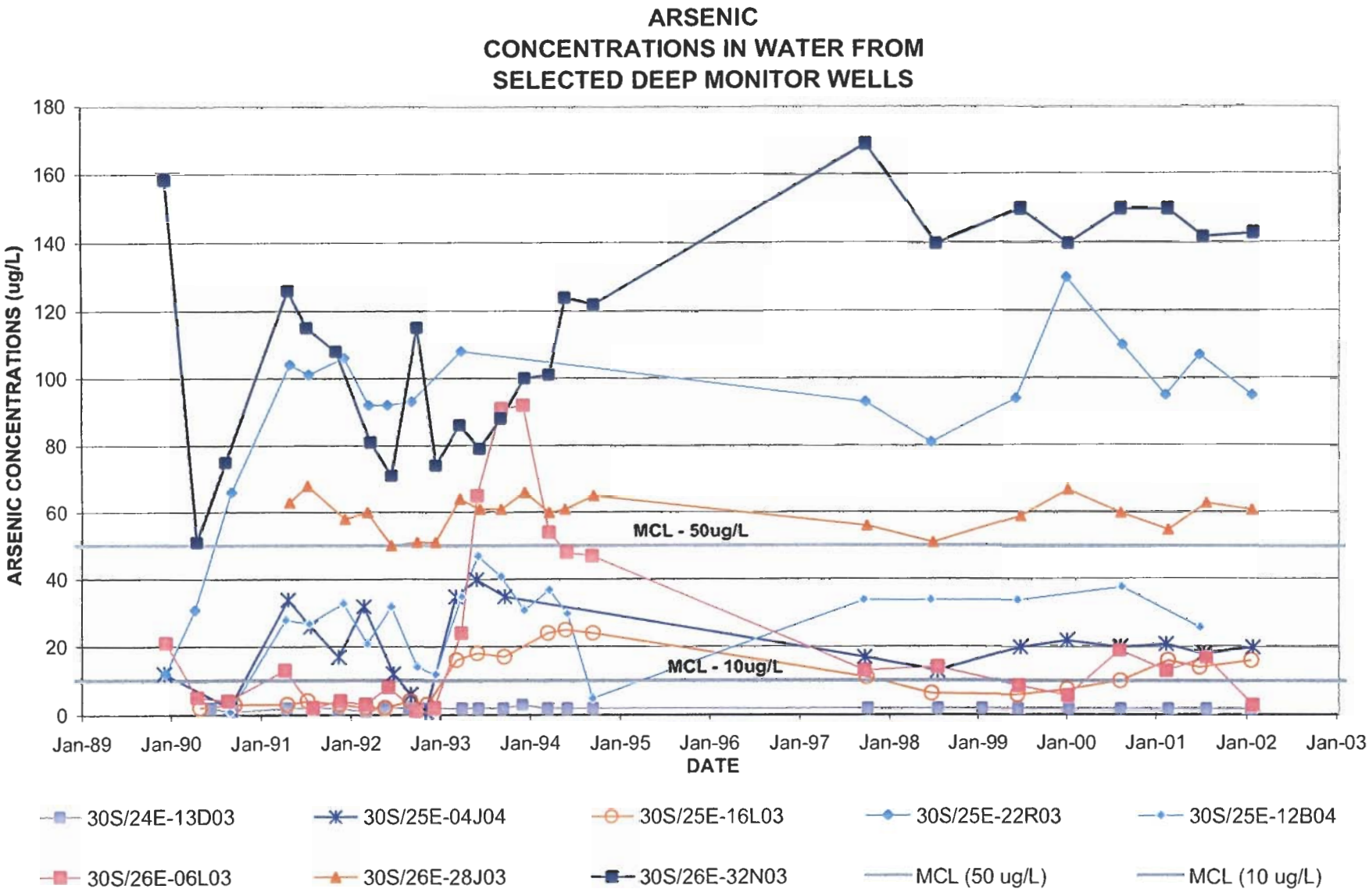
WATER QUALITY HYDROGRAPHS

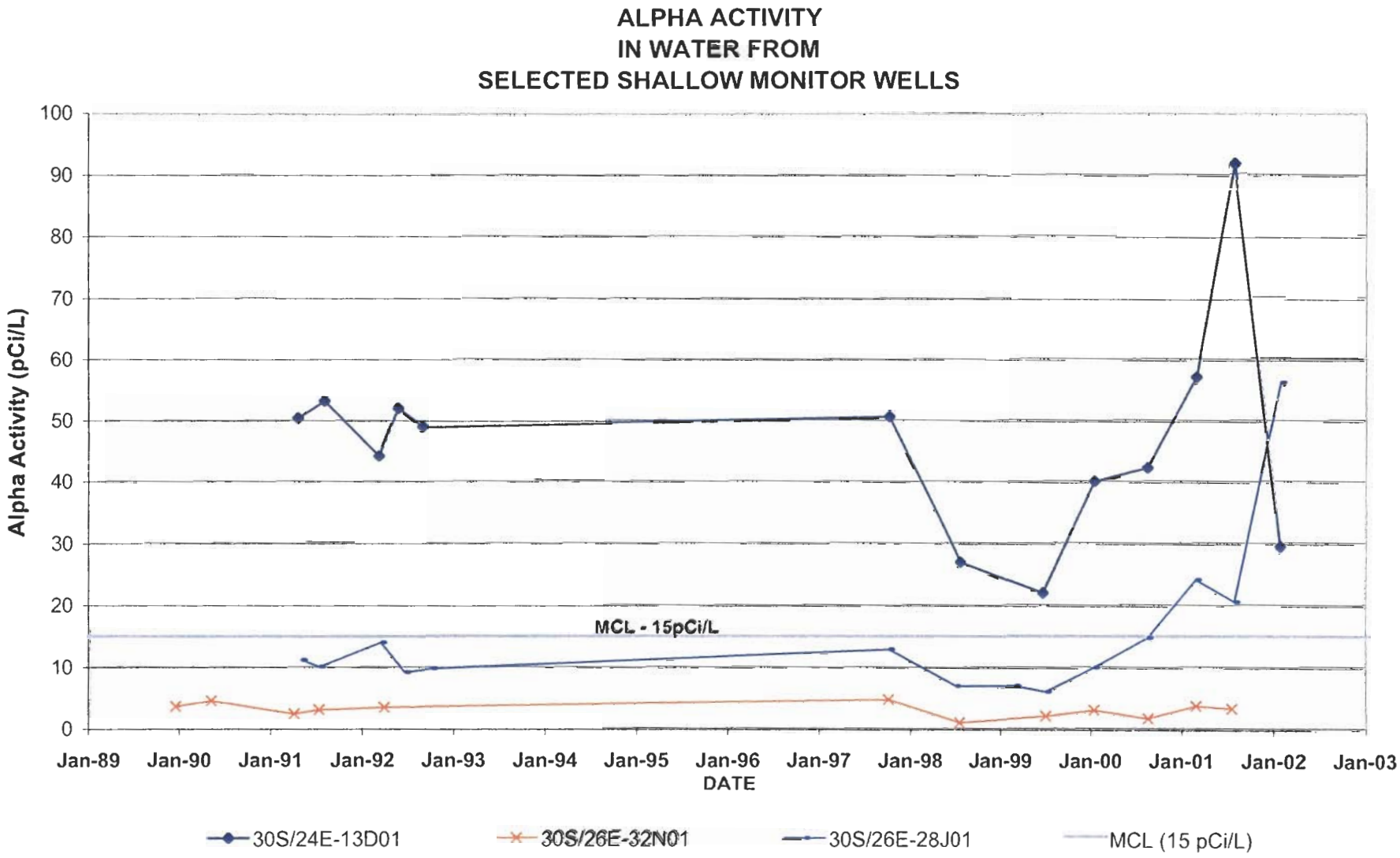
TOTAL DISSOLVED SOLIDS CONCENTRATIONS IN WATER FROM SELECTED SHALLOW MONITOR WELLS



NITRATE (NO3)
CONCENTRATIONS IN WATER FROM
SELECTED SHALLOW MONITOR WELLS




ARSENIC
CONCENTRATIONS IN WATER FROM
SELECTED DEEP MONITOR WELLS
ARSENIC CONCENTRATIONS (ug/L)
180
160
140
120
100
80
60
40
20
0
MCL - 50ug/L
MCL - 10ug/L
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
DATE
30S/24E-13D03
30S/25E-04J04
30S/25E-16L03
30S/25E-22R03
30S/25E-12B04
30S/26E-06L03
30S/26E-28J03
30S/26E-32N03
MCL (50 ug/L)
MCL (10 ug/L)


ALPHA ACTIVITY
IN WATER FROM
SELECTED SHALLOW MONITOR WELLS
Alpha Activity (pCi/L)
100
90
80
70
60
50
40
30
20
10
0
MCL - 15pCi/L
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
DATE
30S/24E-13D01
30S/26E-32N01
30S/26E-28J01
MCL (15 pCi/L)

CHAPTER 5
SECTION C

PUMP-IN PROGRAM CRITERIA AND BLENDING CALCULATIONS

- Pump-in Program Blending Calculations
- Well Manifold Constituent Summary
- Aqueduct Pump-in Program Summary of Changes
- Aqueduct Pump-in Program Changes by Location
- Calculated Monthly Changes in Aqueduct Blend for 2001 Relative to Background
- Well Contribution by Project and Change in TDS
- CVC Pump-in Program Summary of Changes

Pump-in Program Blending Calculations

Background Conditions

Values in blue are for user entry.
Values in black are calculated results or labels.

Choose a model background scenario here, and/or enter data below.

Ambient Model			Allocation					
Year Type	Annual Average	Monthly Average	2001	20%	25%	30%	35%	40%
Critical	○	○	○	○	○	○	○	○
Dry	○	○	45%	50%	55%	60%	65%	
2001	○	○	○	○	○	○	○	

Year Type: 2001 Allocation: 2001

	Demand	Constituent Concentrations								
		As	Br	Cr	Cr+6	NO3	TDS	DOC	SO4	U
Units	cfs	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	pCi/l
MCL		10	None	50	None	45	500	None	250	20
Aqueduct										
January	2348	2.0	210	1.0	1.0	3.5	340	4.0	43	2.0
February	1170	2.0	210	1.0	1.0	3.5	306	4.0	43	2.0
March	2029	2.0	150	1.0	1.0	5.5	255	5.1	51	2.0
April	1517	2.0	170	1.0	0.2	4.3	288	4.6	60	2.0
May	2238	2.0	210	1.0	0.2	3.2	268	3.4	47	2.0
June	1874	2.0	240	1.0	0.2	2.7	275	2.9	42	2.0
July	2039	3.0	170	1.0	0.2	1.9	263	3.0	37	2.0
August	1889	3.0	250	1.0	0.2	1.4	257	2.5	29	2.0
September	2192	3.0	360	1.0	0.2	1.5	320	2.4	34	2.0
October	2205	3.0	360	1.0	0.2	2.0	335	2.4	38	2.0
November	2113	3.0	390	1.0	0.2	2.4	378	2.7	46	2.0
December	1504	2.0	310	1.0	0.2	4.0	307	2.6	39	2.0
Kern River (into RC)	249	3.0	20.0	10.0	1.0	2.0	135.0	2.2	11.0	1.4
Kern River (into CVC)*	0	-	-	-	-	-	-	-	-	-
Friant (into CVC)*	0	-	-	-	-	-	-	-	-	-

* These Kern River & Friant flows modeled into CVC Pool 5. Enter Kern River and Friant data on "Well Data by Pool" sheet.

Manifold Blends

Manifold	Inflow	As	Br	Cr	Cr+6	NO3	TDS	DOC	SO4	U
	cfs	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	pCi/l
Semitropic	0	-	-	-	-	-	-	-	-	-
CVC Pool 1	64	3.3	186	4.0	1.60	13.7	247	1.3	47	12.5
CVC Pool 2	31	4.1	211	4.7	1.55	11.0	270	1.7	44	9.4
CVC Pool 3	8	2.0	200	10.0	1.60	13.5	228	1.4	28	7.1
CVC Pool 4	124	2.4	152	3.7	1.51	8.1	239	1.3	29	11.1
CVC Pool 5 & 6	48	2.0	120	1.0	1.47	4.3	153	1.3	16	3.8
CVC Subtotals East	109	2.2	138	2.5	1.50	6.5	201	1.3	23	7.9
West	165	3.0	179	4.3	1.56	11.1	247	1.4	39	11.1
River Canal	373	3.0	81	7.5	1.20	3.3	155	1.9	16	2.9
KWB Canal	113	6.4	131	4.5	1.60	7.0	206	1.1	40	7.3
Aquatic Lakes	0	-	-	-	-	-	-	-	-	-
WRM6	0	-	-	-	-	-	-	-	-	-
WRM7	2	2.0	200	10.0	1.60	6.2	1,090	1.4	660	2.0
WRM8	0	-	-	-	-	-	-	-	-	-
WRM9	1	5.0	100	1.0	0.50	0.4	1,700	0.5	1,030	5.1
WRM9A-10	1	2.0	200	10.0	1.60	13.3	970	1.4	475	2.0
WRMWSD Subtotal	4	3.0	167	7.0	1.23	5.5	1,272	1.1	751	3.0
Arvin-Edison	0	-	-	-	-	-	-	-	-	-
Well Blend in Aqueduct		4.0	139	5.2	1.47	7.8	223	1.4	41	7.8

Note: Enter Aquatic Lakes, Semitropic and Arvin data on "Well Data by Pool" sheet.

Month Modeled: June

Pump-in Program Blending Calculations

Pump-in Blend for Month: 6 ◉ Recalculate Blends and Savings

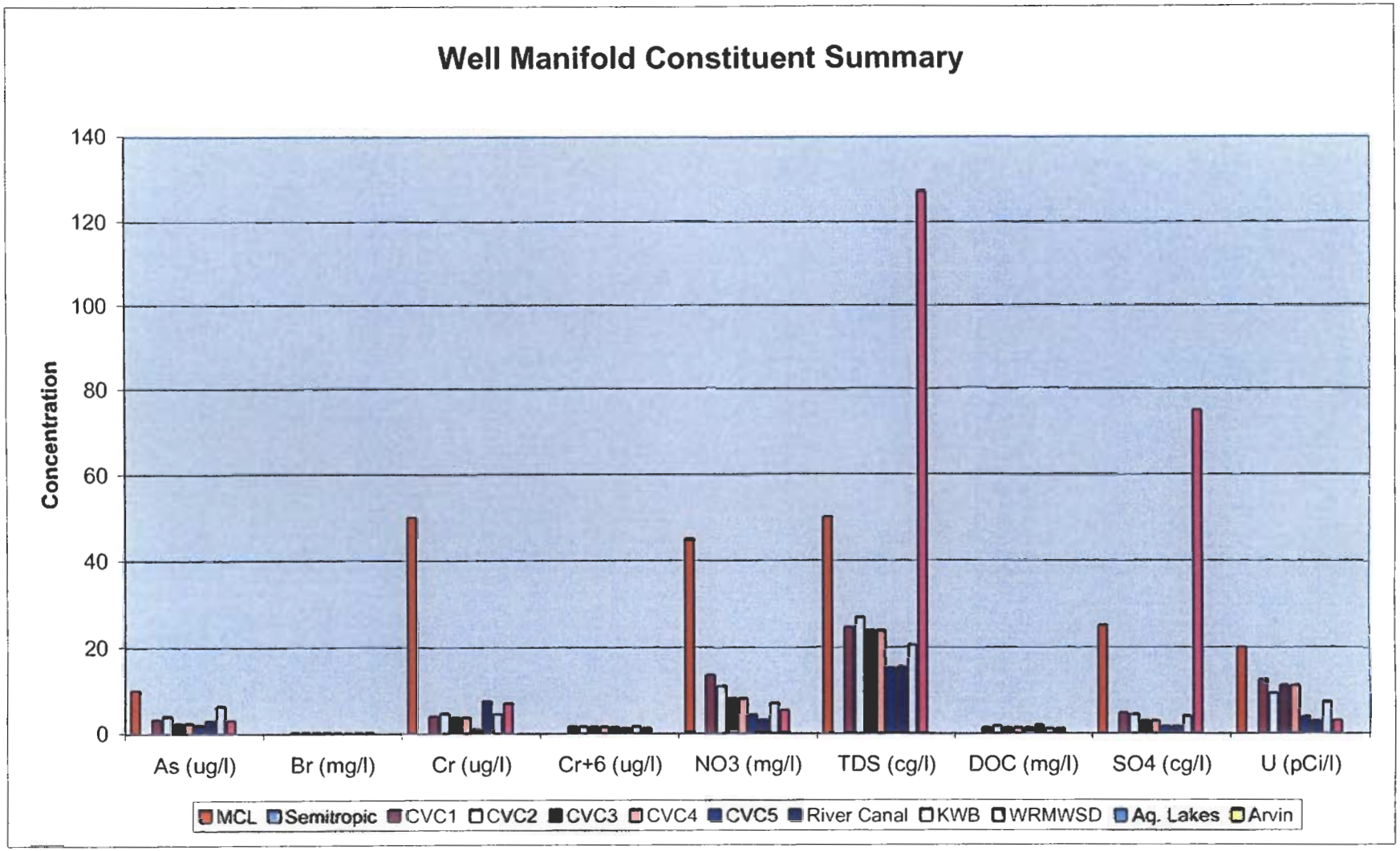
	Total Flow	Constituent Concentrations								
	As	Br	Cr	Cr+6	NO3	TDS	DOC	SO4	U
Units	cfs	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	pCi/l
MCL		10	None	50	None	45	500	None	250	20
Alejandro Blend	274	4.0	116.6	10.1	1.6	4.4	211.0	2.5	21.8	3.9
CVC Blend	109	2.2	138	2.5	1.50	6.5	201	1.3	23	7.9
Change	109	NA	NA	NA	NA	NA	NA	NA	NA	NA
% of the MCL	NA	22%	NA	5%	NA	14%	40%	NA	9%	40%
Aqueduct Blends										
Background	2462	2.0	240	1.0	0.20	2.7	275	2.9	42	2.0
After Semitropic	2324	2.0	240	1.0	0.20	2.7	275	2.9	42	2.0
After CVC	2212	2.1	235	1.2	0.30	3.3	273	2.7	42	2.7
After KWB	2423	2.3	224	1.7	0.40	3.5	265	2.6	41	2.9
After Aquatic Lakes	2325	2.3	224	1.7	0.40	3.5	265	2.6	41	2.9
After WRMWSD 6	2175	2.3	224	1.7	0.40	3.5	265	2.6	41	2.9
After WRMWSD 7	2108	2.3	224	1.7	0.40	3.5	266	2.6	41	2.9
After WRMWSD 8	2056	2.3	224	1.7	0.40	3.5	266	2.6	41	2.9
After WRMWSD 9	2036	2.3	224	1.7	0.40	3.5	267	2.6	42	2.9
After Arvin-Edison	2036	2.3	224	1.7	0.40	3.5	267	2.6	42	2.9
After WRMWSD 9A-10	1919	2.3	224	1.7	0.40	3.5	267	2.6	42	2.9
Total Change	-543	0.3	-16	0.7	0.2	0.8	-7.9	-0.2	0.1	0.9
% of the MCL	NA	23%	NA	3%	NA	8%	53%	NA	17%	15%

Downstream Aqueduct Blend by Month

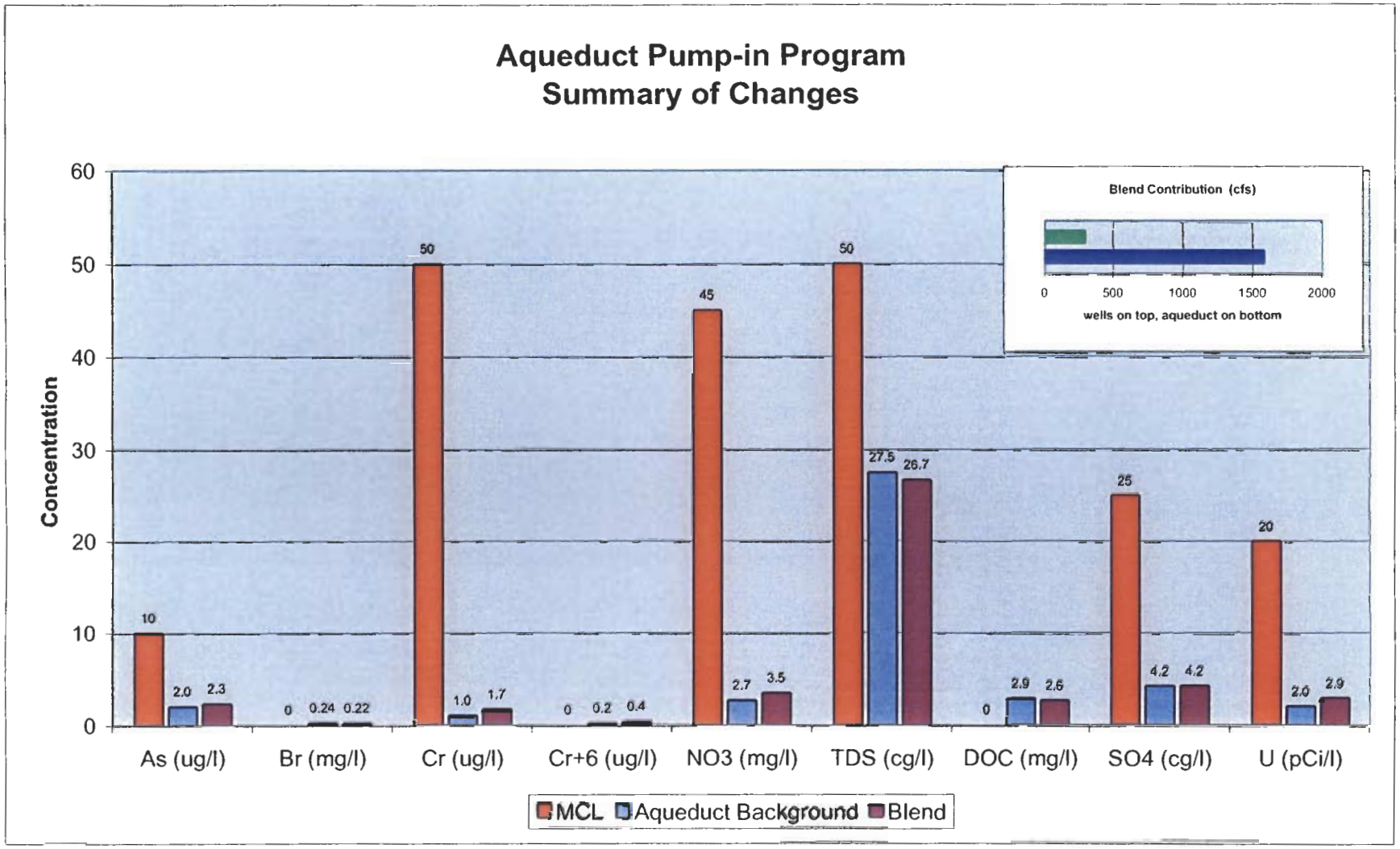
Month	Total Flow	As	Br	Cr	Cr+6	NO3	TDS	DOC	SO4	U
	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	pCi/l
January	2350	2.0	210	1.0	1.00	3.5	340	4.0	43	2.0
February	1170	2.0	210	1.0	1.00	3.5	306	4.0	43	2.0
March	2032	2.4	155	1.3	1.02	5.4	256	4.9	50	2.3
April	1531	2.6	172	1.9	0.63	5.1	274	3.7	54	3.7
May	2274	2.3	202	1.5	0.43	3.9	260	3.0	45	3.0
June	1919	2.3	224	1.7	0.40	3.5	267	2.6	42	2.9
July	2088	3.2	167	1.6	0.38	2.8	257	2.8	37	2.8
August	1927	3.2	238	1.5	0.41	2.5	253	2.3	31	3.0
September	2225	3.1	340	1.3	0.37	2.3	309	2.3	35	2.8
October	2229	3.0	356	1.1	0.23	2.2	333	2.4	38	2.2
November	2114	3.7	359	2.5	1.10	3.0	377	2.6	51	2.3
December	1504	3.3	278	3.1	1.51	4.6	319	2.4	48	2.6

Note: Run "Recalculate Blends and Savings" macro to recalculate all time-dependant values.

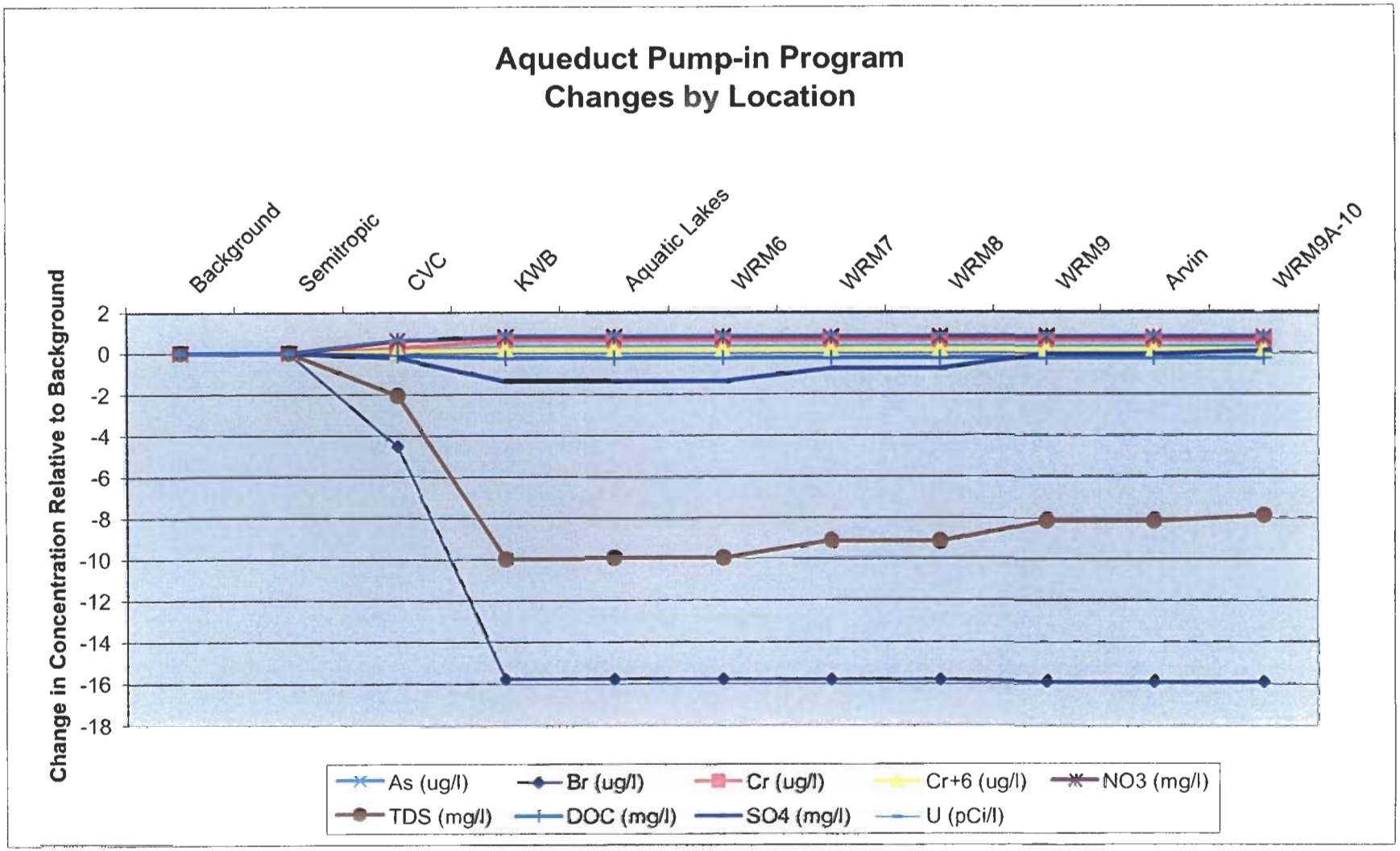
Type Year: **2001**



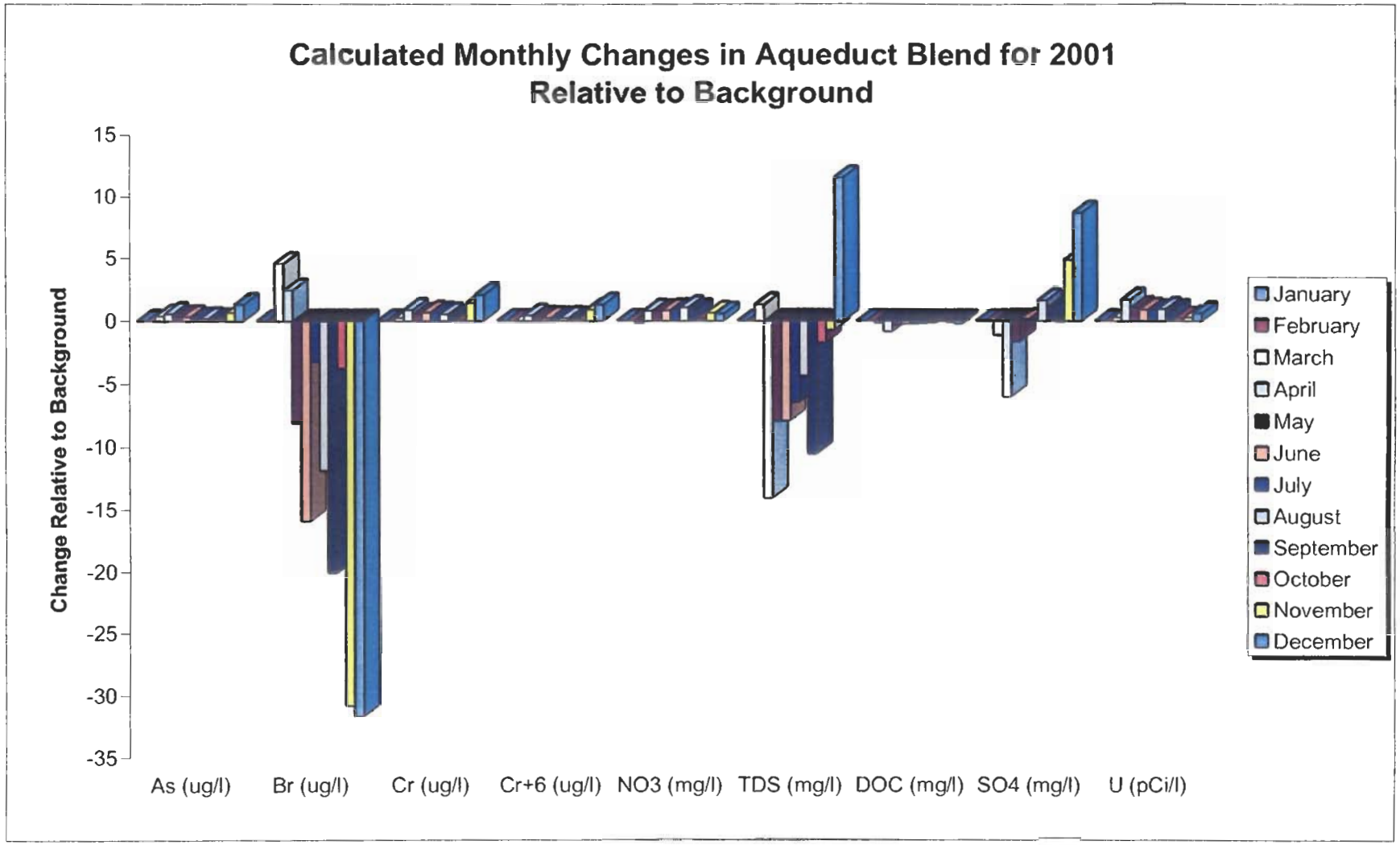
Month Modeled: **June**



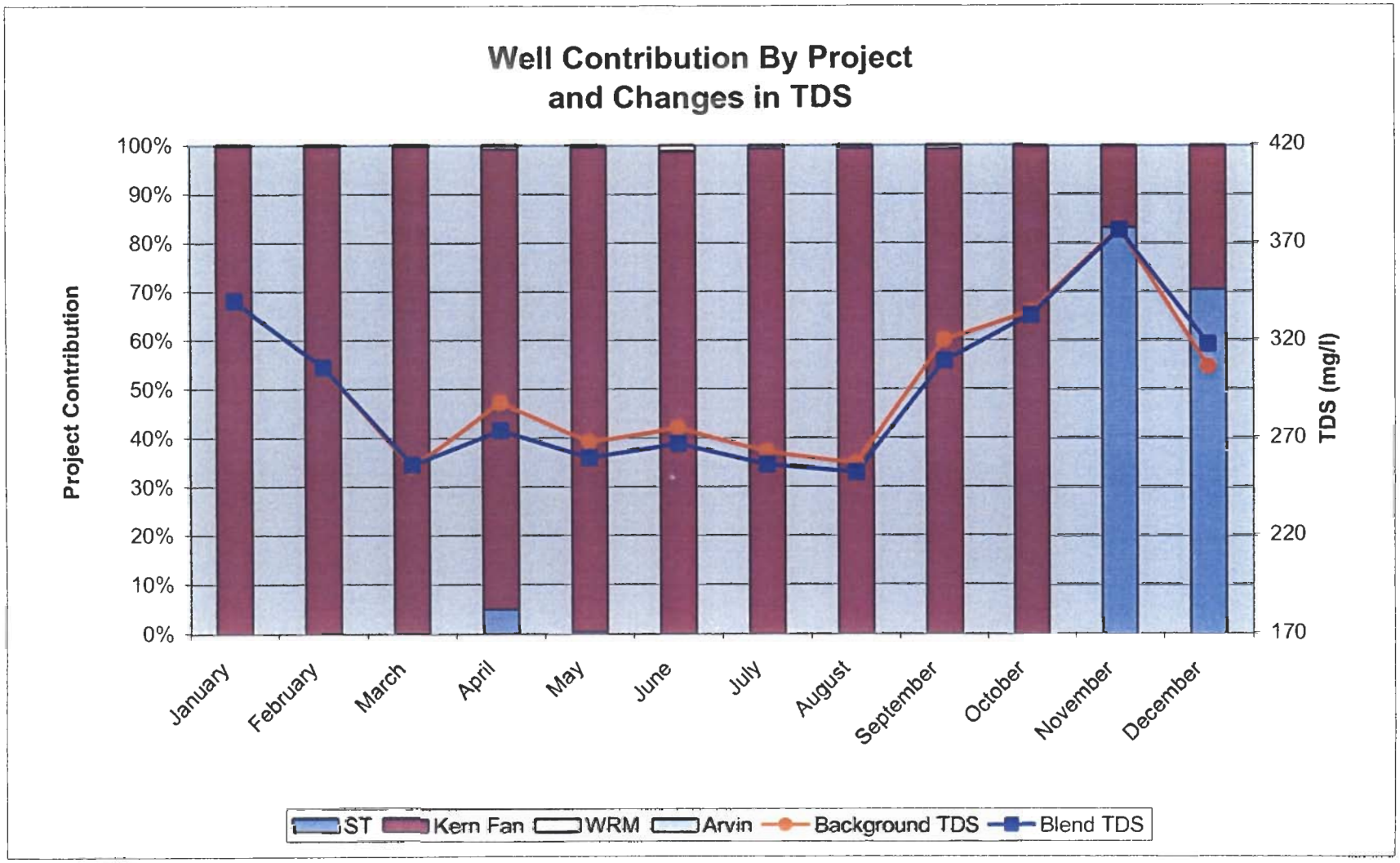
Month Modeled: **June**
Type Year: **2001**



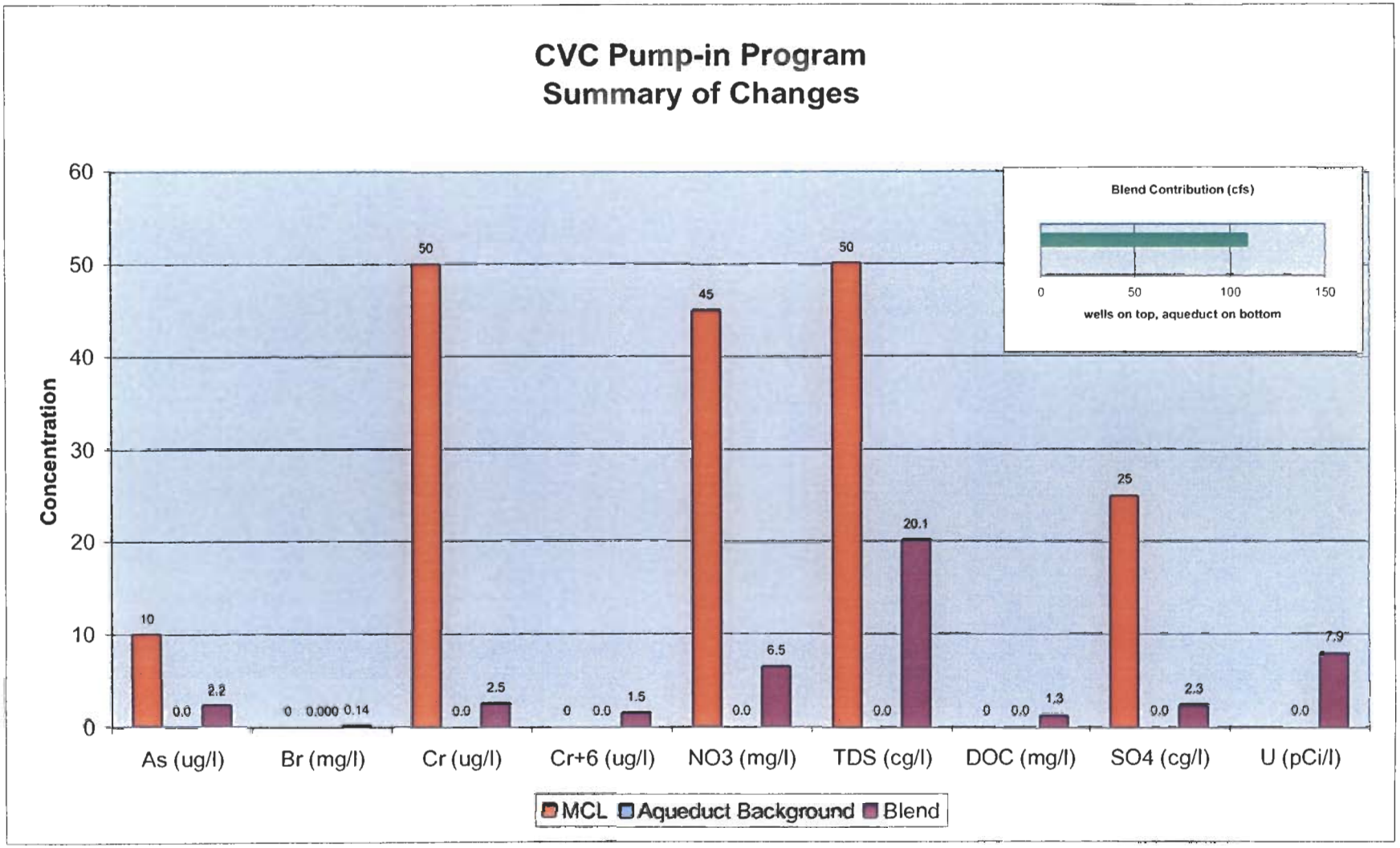
Month Modeled: **June**
Type Year: **2001**



Type Year: 2001



Type Year: 2001
Note: Wells are off in January & February



Month Modeled: **June**
Type Year: **2001**

CONSTITUENTS OF CONCERN SAMPLING
CALIFORNIA AQUEDUCT AND KERN WATER BANK CANAL

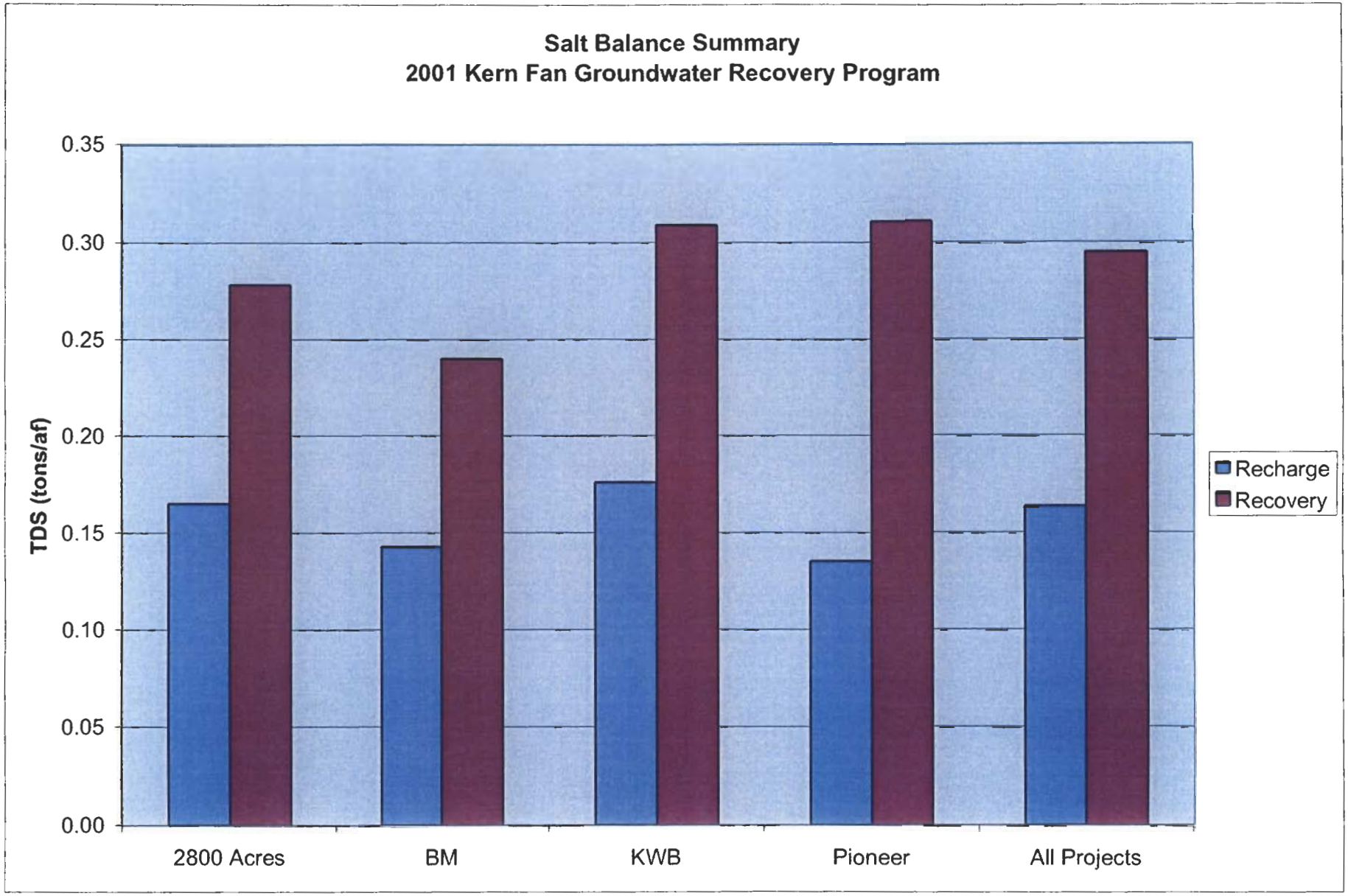
Table 5C-2

Constituent ⇨	Date Sampled	Alpha pCi/L	Alpha Count Error pCi/L	Arsenic ug/L	Bromide mg/L	Chromium ug/L	Cr+6 ug/L	DOC mg/L	Nitrate mg/L	pH	Sulfate mg/L	TDS mg/L	TOC ug/L	Turbidity NTU	Uranium pCi/L	Uranium Count Error pCi/L
Location																
Aqueduct upstream of KWB Canal	3/9/2001	1.56	1.13	2	0.16	2	0.1	NOT SAMPLED	5	8.23	52	320	4.91	4.9	0	1.3
KWB Canal @Aqueduct	3/9/2001	7.72	1.55	2	<0.1	3	1.6	NOT SAMPLED	8.3	8.33	34	210	0.74	7.3	6.3	2
KWB Canal @Aqueduct	6/19/2001	7.56	1.54	5	0.2	2	1.6	1.4	7.1	8.6	39	210	NOT SAMPLED	8.5	3.8	0.852

CHAPTER 5
SECTION D

KERN FAN AREA SALT BALANCE SUMMARY

FIGURE 5D-1 CONSTRUCTED USING TABLES 5D-10 THROUGH 5D-14


Salt Balance Summary
2001 Kern Fan Groundwater Recovery Program
TDS (tons/af)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
2800 Acres
BM
KWB
Pioneer
All Projects
Recharge
Recovery

CHAPTER 5
SECTION D

KERN FAN MONITORING COMMITTEE IMPORTED SALT LOAD

State Water Project
California Aqueduct Near Highway 119 (Check 29)
Water Quality - Total Dissolved Solids (TDS) (1)

Year	Month	TDS (mg/l)	Year	Month	TDS (mg/l)	Year	Month	TDS (mg/l)	Year	Month	TDS (mg/l)
1990	Jan	382	1993	Jan	499	1996	Jan	284	1999	Jan	315
	Feb	369		Feb	472		Feb	251		Feb	216
	Mar	306		Mar	470		Mar	236		Mar	158
	Apr	335		Apr	441		Apr	211		Apr	231
	May	355		May	326		May	265		May	232
	Jun	343		Jun	346		Jun	260		Jun	228
	Jul	338		Jul	334		Jul	214		Jul	199
	Aug	319		Aug	339		Aug	197		Aug	153
	Sep	280		Sep	174		Sep	146		Sep	164
	Oct	310		Oct	206		Oct	152		Oct	258
	Nov	357		Nov	214		Nov	195		Nov	242
	Dec	438		Dec	311		Dec	266		Dec	291
1991	Jan	469	1994	Jan	297	1997	Jan (2)	66	2000	Jan	295
	Feb	448		Feb	328		Feb (2)	88		Feb	250
	Mar	433		Mar	363		Mar	147		Mar	187
	Apr	382		Apr	357		Apr	225		Apr	206
	May	No Rec.		May	340		May	227		May	239
	Jun	361		Jun	339		Jun	219		Jun	239
	Jul	363		Jul	333		Jul	210		Jul	189
	Aug	359		Aug	310		Aug	224		Aug	213
	Sep	326		Sep	395		Sep	154		Sep	164
	Oct	329		Oct	479		Oct	180		Oct	248
	Nov	329		Nov	480		Nov	331		Nov	262
	Dec	356		Dec	427		Dec	293		Dec	301
1992	Jan	439	1995	Jan	417	1998	Jan	297	2001	Jan	374
	Feb	485		Feb	219		Feb	227		Feb	337
	Mar	563		Mar	263		Mar	218		Mar	280
	Apr	358		Apr	274		Apr (2)	108		Apr	275
	May	366		May	144		May (2)	78		May	239
	Jun	353		Jun	152		Jun (2)	78		Jun	227
	Jul	377		Jul	158		Jul (2)	124		Jul	291
	Aug	410		Aug	178		Aug	186		Aug	245
	Sep	361		Sep	165		Sep	206		Sep	323
	Oct	337		Oct	141		Oct	142		Oct	365
	Nov	464		Nov	160		Nov	130		Nov	333
	Dec	456		Dec	270		Dec	207		Dec	310

Notes:

1. Source of data: Table 32 of State Water Project Operations Data published monthly by State of California, Department of Water Resources, Division of Operations and Maintenance.
2. Kern River Intertie opened to divert Kern River and Friant-Kern floodwaters into California Aqueduct.

Kern Fan Monitoring Committee
Salt Load Imported to Basin with Recharge Water Supplies - Summary

Table 5D-1

Recharge Area	Year	Gross Recharge (AF)	Net Recharge (AF)	Salt Load (tons)	Average TDS Gross (mg/l)	Average TDS Net (mg/l)	Net (tons/AF)
Berrenda Mesa	1995	34,486	32,417	5,972	127	136	0.18
	1996	9,966	9,368	985	73	77	0.11
	1997	6,555	6,162	498	56	59	0.08
	1998	20,349	19,128	2,246	81	86	0.12
	1999	633	595	39	45	48	0.07
	2000	1,027	965	60	43	46	0.06
	2001	0	0	0	---	---	---
	Total	73,016	68,635	9,800	99	105	0.14
2800 Acre Facility	1995	109,215	102,662	21,143	142	152	0.21
	1996	39,483	37,114	5,667	106	112	0.15
	1997	5,740	5,396	1,363	175	186	0.25
	1998	56,397	53,013	6,757	88	94	0.13
	1999	10,263	9,647	1,763	126	134	0.18
	2000	30,918	29,063	1,870	45	47	0.06
	2001	2,539	2,387	966	280	298	0
	Total	254,555	239,282	39,529	114	122	0.17
Kern Water Bank	1995	222,260	208,924	33,211	110	117	0.16
	1996	173,875	163,443	33,492	142	151	0.20
	1997	112,262	105,526	20,569	135	143	0.19
	1998	302,715	284,552	40,067	97	104	0.14
	1999	36,753	34,548	9,483	190	202	0.27
	2000	27,579	25,924	5,905	158	168	0.23
	2001	10,030	9,428	3,817	280	298	0
	Total	885,474	832,346	146,544	122	130	0.18
Pioneer Property	1995	79,513	74,742	8,246	76	81	0.11
	1996	45,676	42,935	5,632	91	97	0.13
	1997	30,085	28,280	4,017	98	105	0.14
	1998	69,115	64,968	9,044	96	102	0.14
	1999	13,732	12,908	2,858	153	163	0.22
	2000	15,296	14,378	2,100	101	107	0.15
	2001	1,253	1,178	477	280	298	0
	Total	254,670	239,390	32,374	94	100	0.14
Kern River Channel	1995	3,258	3,063	240	54	58	0.08
	1996	18,325	17,226	1,520	61	65	0.09
	1997	6,471	6,083	739	84	89	0.12
	1998	872	820	67	57	60	0.08
	1999	2,043	1,920	119	43	46	0.06
	2000	4,073	3,829	238	43	46	0.06
	2001	2,214	2,081	219	73	77	0
	Total	37,256	35,021	3,142	62	66	0.09
Combined Areas	1995	448,732	421,808	68,812	113	120	0.16
	1996	287,325	270,086	47,296	121	129	0.18
	1997	161,113	151,446	27,186	124	132	0.18
	1998	449,448	422,481	58,181	95	101	0.14
	1999	63,424	59,619	14,262	165	176	0.24
	2000	78,893	74,159	10,173	95	101	0.14
	2001	16,036	15,074	5,479	251	267	0
	Total	1,504,971	1,414,673	231,389	113	120	0.16

Kern Fan Monitoring Committee
Analysis of Salt Load Imported to Basin
With Recharge Water Supplies

Year - 1995	January			February			March			April		
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)
Berrenda Mesa												
SWP	3,008	417	1,705	3,774	219	1,123	1,255	263	449	0	274	0
FK	0	43	0	734	43	43	1,150	43	67	2,327	43	136
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	3,008		1,705	4,508		1,166	2,405		516	2,327		136
2800 Acres												
SWP	7,432	417	4,212	14,181	219	4,221	6,303	263	2,253	0	274	0
FK	0	43	0	2,100	43	123	175	43	10	264	43	15
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	7,432		4,212	16,281		4,344	6,478		2,263	264		15
Kern Water Bank												
SWP	0	417	0	0	219	0	0	263	0	0	274	0
FK	0	43	0	0	43	0	43	43	3	0	43	0
KR	0	84	0	0	84	0	0	84	0	714	84	82
Totals	0		0	0		0	43		3	714		82
Pioneer Property												
SWP	0	417	0	0	219	0	0	263	0	0	274	0
FK	0	43	0	0	43	0	2,253	43	132	6,551	43	383
KR	0	84	0	0	84	0	0	84	0	1,067	84	122
Totals	0		0	0		0	2,253		132	7,618		505
Kern River Channel												
SWP	0	417	0	0	219	0	0	263	0	0	274	0
FK	0	43	0	0	43	0	226	43	13	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	226		13	0		0

Year - 1995	May			June			July			August		
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)
Berrenda Mesa												
SWP	0	144	0	0	152	0	0	158	0	0	178	0
FK	1,787	43	104	2,214	43	129	1,984	43	116	2,341	43	137
KR	523	84	60	1,036	84	118	581	84	66	319	84	36
Totals	2,310		164	3,250		248	2,565		182	2,660		173
2800 Acres												
SWP	0	144	0	0	152	0	0	158	0	0	178	0
FK	7,658	43	448	7,804	43	456	1,079	43	63	4,558	43	266
KR	4,543	84	519	7,267	84	830	8,118	84	927	8,090	84	924
Totals	12,201		966	15,071		1,286	9,197		990	12,648		1,190
Kern Water Bank												
SWP	0	144	0	988	152	204	0	158	0	708	178	171
FK	8,659	43	506	10,933	43	639	577	43	34	3,557	43	208
KR	1,461	84	167	12,254	84	1,399	32,945	84	3,761	35,816	84	4,089
Totals	10,120		673	24,175		2,242	33,522		3,795	40,081		4,468
Pioneer Property												
SWP	0	144	0	0	152	0	0	158	0	0	178	0
FK	6,442	43	376	4,966	43	290	3,669	43	214	2,780	43	162
KR	4,586	84	524	6,514	84	744	5,785	84	660	8,782	84	1,003
Totals	11,028		900	11,480		1,034	9,454		875	11,562		1,165
Kern River Channel												
SWP	0	144	0	0	152	0	0	158	0	0	178	0
FK	589	43	34	889	43	52	0	43	0	0	43	0
KR	0	84	0	88	84	10	803	84	92	0	84	0
Totals	589		34	977		62	803		92	0		0

Year - 1995	September			October			November			December			Totals	
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	Salt Load (tons)
Berrenda Mesa														
SWP	0	165	0	73	141	14	778	160	169	2,549	270	935	11,437	4,395
FK	3,616	43	211	0	43	0	2,699	43	158	65	43	4	18,917	1,106
KR	0	84	0	1,626	84	186	47	84	5	0	84	0	4,132	472
Totals	3,616		211	1,699		200	3,524		332	2,614		939	34,486	5,972
2800 Acres														
SWP	2,988	165	670	6,452	141	1,236	4,971	160	1,081	5,960	270	2,187	48,287	15,860
FK	5,930	43	347	377	43	22	75	43	4	0	43	0	30,020	1,754
KR	2,890	84	330	0	84	0	0	84	0	0	84	0	30,908	3,529
Totals	11,808		1,347	6,829		1,258	5,046		1,085	5,960		2,187	109,215	21,143
Kern Water Bank														
SWP	2,421	165	543	15,481	141	2,967	26,844	160	5,837	23,887	270	8,765	70,329	18,487
FK	9,527	43	557	10,351	43	605	2,668	43	156	720	43	42	47,035	2,749
KR	19,386	84	2,213	2,320	84	265	0	84	0	0	84	0	104,896	11,975
Totals	31,334		3,313	28,152		3,836	29,512		5,993	24,607		8,807	222,260	33,211
Pioneer Property														
SWP	20	165	4	5,208	141	998	3,342	160	727	1,607	270	590	10,177	2,319
FK	4,052	43	237	254	43	15	3,164	43	185	1,548	43	90	35,679	2,085
KR	4,807	84	549	2,027	84	231	89	84	10	0	84	0	33,657	3,842
Totals	8,879		790	7,489		1,244	6,595		922	3,155		680	79,513	8,246
Kern River Channel														
SWP	0	165	0	0	141	0	0	160	0	0	270	0	0	0
FK	324	43	19	0	43	0	121	43	7	218	43	13	2,367	138
KR	0	84	0	0	84	0	0	84	0	0	84	0	891	102
Totals	324		19	0		0	121		7	218		13	3,258	240

448,732 68,813 113

Water Quality Data Sources: SWP - Table 32 of State Water Project Operations Data published monthly by State of California.
FK - 43 mg/l represents average of 10 samples collected by KCWA between Nov 94 and Feb 02 (range 19 mg/l to 112 mg/l).
KR - 84 mg/l represents average of 52 samples collected by KCWA & Olcese between Mar 90 and Sep 97 (range 38 mg/l to 148 mg/l).

Table 5D-3

Kern Fan Monitoring Committee
Analysis of Salt Load Imported to Basin
With Recharge Water Supplies

Year - 1996 Recharge Project/ Water Source	January Gross Recharge (AF)	January W. Q. TDS (mg/l)	January Salt Load (tons)	February Gross Recharge (AF)	February W. Q. TDS (mg/l)	February Salt Load (tons)	March Gross Recharge (AF)	March W. Q. TDS (mg/l)	March Salt Load (tons)	April Gross Recharge (AF)	April W. Q. TDS (mg/l)	April Salt Load (tons)
Berrenda Mesa												
SWP	111	284	43	184	251	63	0	236	0	0	211	0
FK	107	43	6	135	43	8	636	43	37	3,156	43	184
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	218		49	319		71	636		37	3,156		184
2800 Acres												
SWP	1,307	284	504	2,860	251	976	46	236	15	0	211	0
FK	0	43	0	644	43	38	3,289	43	192	11,428	43	668
KR	0	84	0	601	84	69	1,301	84	149	98	84	11
Totals	1,307		504	4,105		1,082	4,636		355	11,526		679
Kern Water Bank												
SWP	11,587	284	4,472	10,740	251	3,664	6,497	236	2,084	1,409	211	404
FK	32	43	2	2,677	43	156	8,585	43	502	27,123	43	1,585
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	11,619		4,474	13,417		3,820	15,082		2,586	28,532		1,989
Pioneer Property												
SWP	903	284	349	1,803	251	615	355	236	114	0	211	0
FK	466	43	27	2,703	43	158	4,334	43	253	7,070	43	413
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	1,369		376	4,506		773	4,689		367	7,070		413
Kern River Channel												
SWP	0	284	0	254	251	87	0	236	0	0	211	0
FK	165	43	10	252	43	15	2,389	43	140	4,173	43	244
KR	0	84	0	0	84	0	0	84	0	649	84	74
Totals	165		10	506		101	2,389		140	4,822		318

Year - 1996 Recharge Project/ Water Source	May Gross Recharge (AF)	May W. Q. TDS (mg/l)	May Salt Load (tons)	June Gross Recharge (AF)	June W. Q. TDS (mg/l)	June Salt Load (tons)	July Gross Recharge (AF)	July W. Q. TDS (mg/l)	July Salt Load (tons)	August Gross Recharge (AF)	August W. Q. TDS (mg/l)	August Salt Load (tons)
Berrenda Mesa												
SWP	0	265	0	0	260	0	0	214	0	0	197	0
FK	2,098	43	123	293	43	17	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	2,098		123	293		17	0		0	0		0
2800 Acres												
SWP	0	265	0	0	260	0	0	214	0	0	197	0
FK	664	43	39	0	43	0	0	43	0	0	43	0
KR	0	84	0	2,614	84	298	2,541	84	290	105	84	12
Totals	664		39	2,614		298	2,541		290	105		12
Kern Water Bank												
SWP	2,103	265	757	255	260	90	2,015	214	586	11,456	197	3,067
FK	9,437	43	551	2,039	43	119	0	43	0	0	43	0
KR	12,259	84	1,400	10,369	84	1,184	2,282	84	261	0	84	0
Totals	23,799		2,708	12,663		1,393	4,297		847	11,456		3,067
Pioneer Property												
SWP	0	265	0	0	260	0	0	214	0	447	197	120
FK	3,904	43	228	838	43	49	0	43	0	0	43	0
KR	3,048	84	348	3,258	84	372	2,403	84	274	1,409	84	161
Totals	6,952		576	4,096		421	2,403		274	1,856		281
Kern River Channel												
SWP	0	265	0	22	260	8	0	214	0	0	197	0
FK	1,920	43	112	0	43	0	0	43	0	0	43	0
KR	2,097	84	239	457	84	52	884	84	101	0	84	0
Totals	4,017		352	479		60	884		101	0		0

Year - 1996 Recharge Project/ Water Source	September Gross Recharge (AF)	September W. Q. TDS (mg/l)	September Salt Load (tons)	October Gross Recharge (AF)	October W. Q. TDS (mg/l)	October Salt Load (tons)	November Gross Recharge (AF)	November W. Q. TDS (mg/l)	November Salt Load (tons)	December Gross Recharge (AF)	December W. Q. TDS (mg/l)	December Salt Load (tons)	Totals Gross Recharge (AF)	Totals Salt Load (tons)
Berrenda Mesa														
SWP	0	146	0	0	152	0	0	195	0	625	266	226	920	332
FK	0	43	0	379	43	22	0	43	0	0	43	0	6,804	398
KR	0	84	0	524	84	60	321	84	37	1,397	84	159	2,242	256
Totals	0		0	903		82	321		37	2,022		385	9,966	985
2800 Acres														
SWP	0	146	0	0	152	0	0	195	0	4,586	266	1,658	8,799	3,153
FK	0	43	0	603	43	35	1,109	43	65	0	43	0	17,737	1,037
KR	0	84	0	0	84	0	2,311	84	264	3,376	84	385	12,947	1,478
Totals	0		0	603		35	3,420		329	7,962		2,043	39,483	5,667
Kern Water Bank														
SWP	10,695	146	2,122	9,079	152	1,876	5,601	195	1,484	16,055	266	5,804	87,492	26,411
FK	0	43	0	0	43	0	0	43	0	0	43	0	49,893	2,916
KR	0	84	0	0	84	0	1,398	84	160	10,182	84	1,162	36,490	4,166
Totals	10,695		2,122	9,079		1,876	6,999		1,644	26,237		6,966	173,875	33,492
Pioneer Property														
SWP	0	146	0	0	152	0	58	195	15	3,054	266	1,104	6,620	2,317
FK	0	43	0	605	43	35	601	43	35	0	43	0	20,521	1,199
KR	1,150	84	131	980	84	112	2,020	84	231	4,267	84	487	18,535	2,116
Totals	1,150		131	1,585		147	2,679		281	7,321		1,591	45,676	5,632
Kern River Channel														
SWP	0	146	0	0	152	0	0	195	0	64	266	23	340	118
FK	0	43	0	1,546	43	90	1,239	43	72	0	43	0	11,684	683
KR	0	84	0	2,214	84	253	0	84	0	0	84	0	6,301	719
Totals	0		0	3,760		343	1,239		72	64		23	18,325	1,520

287,325 47,296 121

Water Quality Data Sources: SWP - Table 32 of State Water Project Operations Data published monthly by State of California.
FK - 43 mg/l represents average of 10 samples collected by KCWA between Nov 94 and Feb 02 (range 19 mg/l to 112 mg/l).
KR - 84 mg/l represents average of 52 samples collected by KCWA & Olcese between Mar 90 and Sep 97 (range 38 mg/l to 148 mg/l).

Kern Fan Monitoring Committee
Analysis of Salt Load Imported to Basin
With Recharge Water Supplies

Year - 1997	January			February			March			April		
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)
Berrenda Mesa												
SWP	52	66	5	0	88	0	0	147	0	0	225	0
FK	2,932	43	171	1,544	43	90	0	43	0	0	43	0
KR	139	84	16	506	84	58	1,366	84	156	16	84	2
Totals	3,123		192	2,050		148	1,366		156	16		2
2800 Acres												
SWP	65	66	6	0	88	0	0	147	0	0	225	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	875	84	100	0	84	0	0	84	0	623	84	71
Totals	940		106	0		0	0		0	623		71
Kern Water Bank												
SWP	987	66	89	0	88	0	5,627	147	1,124	2,772	225	848
FK	25,506	43	1,491	3,300	43	193	0	43	0	0	43	0
KR	6,418	84	733	18,330	84	2,093	13,771	84	1,572	4,781	84	546
Totals	32,911		2,312	21,630		2,285	19,398		2,696	7,553		1,393
Pioneer Property												
SWP	131	66	12	0	88	0	0	147	0	0	225	0
FK	7,304	43	427	0	43	0	24	43	1	0	43	0
KR	2,501	84	286	7,185	84	820	5,965	84	681	1,534	84	175
Totals	9,936		724	7,185		820	5,989		682	1,534		175
Kern River Channel												
SWP	0	66	0	0	88	0	0	147	0	0	225	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	188	84	21
Totals	0		0	0		0	0		0	188		21

Year - 1997	May			June			July			August		
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)
Berrenda Mesa												
SWP	0	227	0	0	219	0	0	210	0	0	224	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	0		0	0		0
2800 Acres												
SWP	0	227	0	0	219	0	0	210	0	0	224	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	1,680	84	192	0	84	0	0	84	0	0	84	0
Totals	1,680		192	0		0	0		0	0		0
Kern Water Bank												
SWP	0	227	0	0	219	0	0	210	0	0	224	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	107	84	12	0	84	0	0	84	0	0	84	0
Totals	107		12	0		0	0		0	0		0
Pioneer Property												
SWP	0	227	0	0	219	0	0	210	0	0	224	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	1,450	84	166	490	84	56	0	84	0	0	84	0
Totals	1,450		166	490		56	0		0	0		0
Kern River Channel												
SWP	0	227	0	0	219	0	0	210	0	0	224	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	79	84	9	0	84	0	0	84	0	0	84	0
Totals	79		9	0		0	0		0	0		0

Year - 1997	September			October			November			December			Totals	
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	Salt Load (tons)
Berrenda Mesa														
SWP	0	154	0	0	180	0	0	331	0	0	293	0	52	5
FK	0	43	0	0	43	0	0	43	0	0	43	0	4,476	262
KR	0	84	0	0	84	0	0	84	0	0	84	0	2,027	231
Totals	0		0	0		0	0		0	0		0	6,555	498
2800 Acres														
SWP	0	154	0	0	180	0	0	331	0	2,497	293	994	2,562	1,000
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	0
KR	0	84	0	0	84	0	0	84	0	0	84	0	3,178	363
Totals	0		0	0		0	0		0	2,497		994	5,740	1,363
Kern Water Bank														
SWP	2,769	154	580	2,563	180	627	11,165	331	5,023	14,166	293	5,641	40,049	13,931
FK	0	43	0	0	43	0	0	43	0	0	43	0	28,806	1,683
KR	0	84	0	0	84	0	0	84	0	0	84	0	43,407	4,955
Totals	2,769		580	2,563		627	11,165		5,023	14,166		5,641	112,262	20,569
Pioneer Property														
SWP	0	154	0	0	180	0	0	331	0	3,501	293	1,394	3,632	1,406
FK	0	43	0	0	43	0	0	43	0	0	43	0	7,328	428
KR	0	84	0	0	84	0	0	84	0	0	84	0	19,125	2,183
Totals	0		0	0		0	0		0	3,501		1,394	30,085	4,017
Kern River Channel														
SWP	0	154	0	0	180	0	0	331	0	0	293	0	0	0
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	0
KR	0	84	0	0	84	0	6,204	84	708	0	84	0	6,471	739
Totals	0		0	0		0	6,204		708	0		0	6,471	739

Water Quality Data Sources:
SWP - Table 32 of State Water Project Operations Data published monthly by State of California.
FK - 43 mg/l represents average of 10 samples collected by KCWA between Nov 94 and Feb 02 (range 19 mg/l to 112 mg/l).
KR - 84 mg/l represents average of 52 samples collected by KCWA & Olcese between Mar 90 and Sep 97 (range 38 mg/l to 148 mg/l).

161,113 27,186 124

Kern Fan Monitoring Committee
Analysis of Salt Load Imported to Basin
With Recharge Water Supplies

Year - 1998	January			February			March			April			May			June		
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)
Berrenda Mesa																		
SWP	0	297	0	0	227	0	0	218	0	0	108	0	0	78	0	0	78	0
FK	0	43	0	412	43	24	1,505	43	88	857	43	50	0	43	0	0	43	0
KR	0	84	0	2,331	84	266	609	84	70	66	84	8	2,015	84	230	1,698	84	194
Totals	0		0	2,743		290	2,114		157	923		58	2,015		230	1,698		194
2800 Acres																		
SWP	1,631	297	658	0	227	0	0	218	0	0	108	0	0	78	0	0	78	0
FK	0	43	0	1,335	43	78	0	43	0	0	43	0	0	43	0	0	43	0
KR	2,539	84	290	12,949	84	1,478	10,965	84	1,252	8,495	84	970	0	84	0	0	84	0
Totals	4,170		948	14,284		1,556	10,965		1,252	8,495		970	0		0	0		0
Kern Water Bank																		
SWP	13,952	297	5,632	3,118	227	962	0	218	0	0	108	0	0	78	0	0	78	0
FK	0	43	0	10,259	43	600	24,391	43	1,425	5,717	43	334	0	43	0	0	43	0
KR	887	84	101	9,625	84	1,099	10,020	84	1,144	26,924	84	3,074	30,701	84	3,505	33,968	84	3,878
Totals	14,839		5,733	23,002		2,660	34,411		2,569	32,641		3,408	30,701		3,505	33,968		3,878
Pioneer Property																		
SWP	2,677	297	1,081	0	227	0	0	218	0	0	108	0	0	78	0	0	78	0
FK	0	43	0	421	43	25	1,573	43	92	159	43	9	0	43	0	0	43	0
KR	0	84	0	5,018	84	573	4,055	84	463	5,037	84	575	8,452	84	965	7,456	84	851
Totals	2,677		1,081	5,439		597	5,628		555	5,196		584	8,452		965	7,456		851
Kern River Channel																		
SWP	0	297	0	0	227	0	0	218	0	0	108	0	0	78	0	0	78	0
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0
KR	264	84	30	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0
Totals	264		30	0		0	0		0	0		0	0		0	0		0

Year - 1998	July			August			September			October			November			December			Totals	
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	Salt Load (tons)
Berrenda Mesa																				
SWP	0	124	0	0	186	0	607	206	170	60	142	12	0	130	0	319	207	90	986	271
FK	424	43	25	0	43	0	0	43	0	0	43	0	0	43	0	1,034	43	60	4,232	247
KR	1,246	84	142	1,809	84	207	1,380	84	158	2,070	84	236	1,889	84	216	18	84	2	15,131	1,727
Totals	1,670		167	1,809		207	1,987		327	2,130		248	1,889		216	1,371		152	20,349	2,246
2800 Acres																				
SWP	0	124	0	0	186	0	0	206	0	986	142	190	0	130	0	30	207	8	2,647	857
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	2,910	43	170	4,245	248
KR	6,271	84	716	0	84	0	0	84	0	4,471	84	510	3,137	84	358	678	84	77	49,505	5,652
Totals	6,271		716	0		0	0		0	5,457		701	3,137		358	3,618		256	56,397	6,757
Kern Water Bank																				
SWP	0	124	0	0	186	0	6,447	206	1,805	15,270	142	2,947	3,804	130	672	8,564	207	2,409	51,155	14,427
FK	9,404	43	550	0	43	0	0	43	0	0	43	0	0	43	0	5,477	43	320	55,248	3,229
KR	24,710	84	2,821	29,615	84	3,381	10,305	84	1,176	3,987	84	455	15,298	84	1,746	272	84	31	196,312	22,411
Totals	34,114		3,371	29,615		3,381	16,752		2,981	19,257		3,402	19,102		2,419	14,313		2,760	302,715	40,067
Pioneer Property																				
SWP	0	124	0	0	186	0	1,644	206	460	1,989	142	384	43	130	8	1,293	207	364	7,646	2,296
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	2,682	43	157	4,835	283
KR	7,073	84	807	5,826	84	665	4,836	84	552	3,961	84	452	4,797	84	548	123	84	14	56,634	6,465
Totals	7,073		807	5,826		665	6,480		1,012	5,950		836	4,840		555			535	69,115	9,044
Kern River Channel																				
SWP	0	124	0	0	186	0	0	206	0	0	142	0	0	130	0	8	207	2	8	2
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	600	43	35	600	35
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	264	30
Totals	0		0	0		0	0		0	0		0	0		0	608		37	872	67

449,448 58,181 95

Water Quality Data Sources: SWP - Table 32 of State Water Project Operations Data published monthly by State of California.
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KR - 84 mg/l represents average of 52 samples collected by KCWA & Olcese between Mar 90 and Sep 97 (range 38 mg/l to 148 mg/l).

Kern Fan Monitoring Committee
Analysis of Salt Load Imported to Basin
With Recharge Water Supplies

Year - 1999	January			February			March			April			May			June			July			August			September			October			November			December			Totals	
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	Salt Load (tons)
Berrenda Mesa																																						
SWP	0	315	0	0	216	0	0	158	0	0	231	0	0	232	0	0	228	0	0	199	0	0	153	0	0	164	0	0	258	0	0	242	0	0	291	0	0	0
FK	401	43	23	198	43	12	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	599	35
KR	34	84	4	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	34	4
Totals	435		27	198		12	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	633	39
2800 Acres																																						
SWP	0	315	0	0	216	0	0	158	0	0	231	0	0	232	0	0	228	0	0	199	0	0	153	0	0	164	0	2,073	258	727	1,495	242	492	0	291	0	3,568	1,219
FK	1,313	43	77	2,639	43	154	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	3,952	231
KR	650	84	74	2,093	84	239	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	2,743	313
Totals	1,963		151	4,732		393	0		0	0		0	0		0	0		0	0		0	0		0	0		0	2,073		727	1,495		492	0		0	10,263	1,763
Kern Water Bank																																						
SWP	1,525	315	653	1,149	216	337	1,022	158	219	2,274	231	714	347	232	109	0	228	0	0	199	0	0	153	0	0	164	0	5,758	258	2,019	10,780	242	3,545	3,156	291	1,248	26,011	8,846
FK	3,002	43	175	7,561	43	442	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	10,563	617
KR	0	84	0	179	84	20	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	179	20
Totals	4,527		828	8,889		800	1,022		219	2,274		714	347		109	0		0	0		0	0		0	0		0	5,758		2,019	10,780		3,545	3,156		1,248	36,753	9,483
Pioneer Property																																						
SWP	0	315	0	0	216	0	0	158	0	0	231	0	0	232	0	0	228	0	0	199	0	0	153	0	0	164	0	2,890	258	1,013	2,206	242	726	1,640	291	649	6,736	2,387
FK	2,119	43	124	3,773	43	220	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	5,892	344
KR	0	84	0	1,104	84	126	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	1,104	126
Totals	2,119		124	4,877		347	0		0	0		0	0		0	0		0	0		0	0		0	0		0	2,890		1,013	2,206		726	1,640		649	13,732	2,858
Kern River Channel																																						
SWP	0	315	0	0	216	0	0	158	0	0	231	0	0	232	0	0	228	0	0	199	0	0	153	0	0	164	0	0	258	0	0	242	0	0	291	0	0	0
FK	160	43	9	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	35	43	2	1,848	43	108	2,043	119
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	160		9	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	35		2	1,848		108	2,043	119

Water Quality Data Sources: SWP - Table 32 of State Water Project Operations Data published monthly by State of California.
FK - 43 mg/l represents average of 10 samples collected by KCWA between Nov 94 and Feb 02 (range 19 mg/l to 112 mg/l).
KR - 84 mg/l represents average of 52 samples collected by KCWA & Olcese between Mar 90 and Sep 97 (range 38 mg/l to 148 mg/l).

63,424 14,262 165

Kern Fan Monitoring Committee
Analysis of Salt Load Imported to Basin
With Recharge Water Supplies

Year - 2000	January			February			March			April			May			June			July			August			September			October			November			December			Totals	
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	Salt Load (tons)
Berrenda Mesa																																						
SWP	0	295	0	0	250	0	0	187	0	0	206	0	0	239	0	0	239	0	0	189	0	0	213	0	0	164	0	0	248	0	0	262	0	0	301	0	0	0
FK	0	43	0	0	43	0	1,027	43	60	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	1,027	60
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	0		0	0		0	1,027		60	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	1,027	60
2800 Acres																																						
SWP	0	295	0	0	250	0	79	187	20	0	206	0	179	239	58	0	239	0	0	189	0	0	213	0	0	164	0	0	248	0	0	262	0	0	301	0	258	78
FK	0	43	0	0	43	0	16,958	43	991	968	43	57	12,247	43	716	487	43	28	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	30,660	1,792
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	0		0	0		0	17,037		1,011	968		57	12,426		774	487		28	0		0	0		0	0		0	0		0	0		0	0		0	30,918	1,870
Kern Water Bank																																						
SWP	224	295	90	4,896	250	1,664	14,002	187	3,559	0	206	0	0	239	0	0	239	0	0	189	0	0	213	0	0	164	0	0	248	0	333	262	119	0	301	0	19,455	5,430
FK	0	43	0	0	43	0	7,448	43	435	0	43	0	676	43	40	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	8,124	475
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	224		90	4,896		1,664	21,450		3,994	0		0	676		40	0		0	0		0	0		0	0		0	0		0	333		119	0		0	27,579	5,905
Pioneer Property																																						
SWP	2	295	1	0	250	0	3,062	187	778	1,472	206	412	1,053	239	342	0	239	0	0	189	0	0	213	0	0	164	0	0	248	0	0	262	0	0	301	0	5,589	1,533
FK	0	43	0	0	43	0	3,288	43	192	127	43	7	6,050	43	354	242	43	14	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	9,707	567
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	2		1	0		0	6,350		970	1,599		420	7,103		696	242		14	0		0	0		0	0		0	0		0	0		0	0		0	15,296	2,100
Kern River Channel																																						
SWP	0	295	0	0	250	0	0	187	0	0	206	0	0	239	0	0	239	0	0	189	0	0	213	0	0	164	0	0	248	0	0	262	0	0	301	0	0	0
FK	0	43	0	0	43	0	3,858	43	225	215	43	13	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	0	43	0	4,073	238
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	0		0	0		0	3,858		225	215		13	0		0	0		0	0		0	0		0	0		0	0		0	0		0	0		0	4,073	238

78,893 10,174 95

Water Quality Data Sources: SWP - Table 32 of State Water Project Operations Data published monthly by State of California.
FK - 43 mg/l represents average of 10 samples collected by KCWA between Nov 94 and Feb 02 (range 19 mg/l to 112 mg/l).
KR - 84 mg/l represents average of 52 samples collected by KCWA & Olcese between Mar 90 and Sep 97 (range 38 mg/l to 148 mg/l).

Kern Fan Monitoring Committee
Analysis of Salt Load Imported to Basin
With Recharge Water Supplies

Year - 2001	January			February			March			April		
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)
Berrenda Mesa												
SWP	0	374	0	0	337	0	0	280	0	0	275	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	0		0	0		0
2800 Acres												
SWP	0	374	0	0	337	0	2,539	280	966	0	275	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	2,539		966	0		0
Kern Water Bank												
SWP	0	374	0	0	337	0	10,030	280	3,817	0	275	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	10,030		3,817	0		0
Pioneer Property												
SWP	0	374	0	0	337	0	1,253	280	477	0	275	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	1,253		477	0		0
Kern River Channel												
SWP	0	374	0	0	337	0	139	280	53	0	275	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	139		53	0		0

Year - 2001	May			June			July			August		
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)
Berrenda Mesa												
SWP	0	239	0	0	227	0	0	291	0	0	245	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	0		0	0		0
2800 Acres												
SWP	0	239	0	0	227	0	0	291	0	0	245	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	0		0	0		0
Kern Water Bank												
SWP	0	239	0	0	227	0	0	291	0	0	245	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	0		0	0		0
Pioneer Property												
SWP	0	239	0	0	227	0	0	291	0	0	245	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	0		0	0		0
Kern River Channel												
SWP	0	239	0	0	227	0	0	291	0	0	245	0
FK	0	43	0	0	43	0	0	43	0	0	43	0
KR	0	84	0	0	84	0	0	84	0	0	84	0
Totals	0		0	0		0	0		0	0		0

Year - 2001	September			October			November			December			Totals	
Recharge Project/ Water Source	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	W. Q. TDS (mg/l)	Salt Load (tons)	Gross Recharge (AF)	Salt Load (tons)
Berrenda Mesa														
SWP	0	323	0	0	365	0	0	333	0	0	310	0	0	0
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	0
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	0		0	0		0	0		0	0		0	0	0
2800 Acres														
SWP	0	323	0	0	365	0	0	333	0	0	310	0	2,539	966
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	0
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	0		0	0		0	0		0	0		0	2,539	966
Kern Water Bank														
SWP	0	323	0	0	365	0	0	333	0	0	310	0	10,030	3,817
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	0
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	0		0	0		0	0		0	0		0	10,030	3,817
Pioneer Property														
SWP	0	323	0	0	365	0	0	333	0	0	310	0	1,253	477
FK	0	43	0	0	43	0	0	43	0	0	43	0	0	0
KR	0	84	0	0	84	0	0	84	0	0	84	0	0	0
Totals	0		0	0		0	0		0	0		0	1,253	477
Kern River Channel														
SWP	0	323	0	0	365	0	0	333	0	0	310	0	139	53
FK	0	43	0	1,262	43	74	0	43	0	0	43	0	1,262	74
KR	0	84	0	0	84	0	8	84	1	805	84	92	813	93
Totals	0		0	1,262		74	8		1	805		92	2,214	219

Water Quality Data Sources: SWP - Table 32 of State Water Project Operations Data published monthly by State of California.
FK - 43 mg/l represents average of 10 samples collected by KCWA between Nov 94 and Feb 02 (range 19 mg/l to 112 mg/l).
KR - 84 mg/l represents average of 52 samples collected by KCWA & Olcese between Mar 90 and Sep 97 (range 38 mg/l to 148 mg/l).

16,036 5,479 251

CHAPTER 5
SECTION D

KERN FAN MONITORING COMMITTEE RECOVERY SUMMARY AND SALT CONTENT

Kern Fan Monitoring Committee
2800 Acres
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd (tons)	TDS (tons/af)
KCWA 1	0	152	63	246	295	294	295	287	125	0	0	0	1,757	250	597	0.34
KCWA 2	0	50	83	326	323	300	300	249	132	0	0	0	1,763	170	407	0.23
KCWA 3	0	159	94	320	316	296	292	292	125	0	0	0	1,894	200	515	0.27
KCWA 4	0	46	103	343	324	205	307	301	132	0	0	0	1,761	150	359	0.20
KCWA 5	0	131	95	333	289	259	278	298	132	0	0	0	1,815	150	370	0.20
KCWA 7	0	0	0	378	415	301	301	343	146	0	0	0	1,884	210	538	0.29
KCWA 8	0	191	101	375	357	335	335	327	142	0	0	0	2,163	290	853	0.39
KCWA 9	0	0	0	336	380	335	347	340	146	0	0	0	1,884	210	538	0.29
KCWA 10	0	0	90	348	338	299	297	289	126	0	0	0	1,787	280	680	0.38
Olcese 1	0	0	44	455	421	346	329	318	297	0	0	0	2,210	210	631	0.29
Olcese 2	0	0	42	450	427	360	351	341	306	0	0	0	2,277	170	526	0.23
Olcese 3	0	0	24	380	328	417	405	392	345	0	0	0	2,291	200	623	0.27
Olcese 4	0	0	26	466	489	467	465	453	392	0	0	0	2,758	200	750	0.27
Olcese 5	0	0	26	461	489	469	449	454	393	0	0	0	2,741	220	820	0.30
Olcese 6	0	0	12	418	457	444	442	433	375	0	0	0	2,581	200	702	0.27
Olcese 7	0	0	41	423	432	359	382	413	354	0	0	0	2,404	210	686	0.29
Olcese 8	0	0	35	369	398	379	395	392	333	0	0	0	2,301	160	500	0.22
TOTAL	0	729	879	6,427	6,478	5,865	5,970	5,922	4,001	0	0	0	36,271	---	10,093	0.28
													TDS (tons/af) of recharged water*			0.17
													ratio of salt removed/salt loaded			1.7

* See "Salt Load Summary.xls" for determination of TDS of recharged water.

Kern Fan Monitoring Committee
Berrenda Mesa Project
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd (tons)	TDS (tons/af)
BK 1	0	0	148	345	339	318	322	237	0	221	141	0	2,071	150	422	0.20
BK 2	0	0	156	383	378	357	54	0	0	241	152	0	1,721	140	327	0.19
BK 3	0	0	160	372	367	278	362	278	0	229	139	0	2,185	150	445	0.20
BK 4	0	0	100	351	366	333	217	252	0	215	150	0	1,984	230	620	0.31
BK 5	0	0	88	331	352	335	353	267	0	209	138	0	2,073	160	451	0.22
BK 6	0	0	97	377	402	382	399	304	0	254	162	0	2,377	130	420	0.18
BK 7	0	0	0	0	0	461	470	244	0	0	0	0	1,175	228	364	0.31
BK 8	0	0	0	394	444	401	399	207	0	184	151	0	2,180	312	924	0.42
BK 9	0	0	0	0	0	0	0	0	0	0	0	0	0	173	0	
BK 10	0	0	0	0	87	410	406	211	0	0	0	0	1,114	240	363	0.33
BK 11	0	0	0	0	106	356	370	183	0	0	0	0	1,015	214	295	0.29
BK 12	0	0	0	0	0	153	363	189	0	0	0	0	705	202	194	0.27
BM 1	0	0	100	321	322	308	321	200	330	328	122	0	2,352	110	352	0.15
BM 3	0	0	57	263	279	267	281	174	245	291	109	0	1,966	120	321	0.16
TOTAL	0	0	906	3,137	3,442	4,359	4,317	2,746	575	2,172	1,264	0	22,918	---	5,499	0.24
															TDS (tons/af) of recharged water*	0.14
															ratio of salt removed/salt loaded	1.7

* See "Salt Load Summary.xls" for determination of TDS of recharged water.

Kern Fan Monitoring Committee
Kern Water Bank
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd. (tons)	TDS (tons/af)
30S/24E-24A01	0	0	0	41	137	185	186	182	77	0	0	16	824	650	728	0.88
30S/25E-03Q01	0	0	0	0	0	0	8	370	168	0	0	0	546	300	223	0.41
30S/25E-04L01	0	0	126	389	396	376	381	372	0	0	0	0	2,040	250	693	0.34
30S/25E-05K01	0	0	0	155	410	392	398	390	0	0	0	0	1,745	131	311	0.18
30S/25E-06K01	0	0	223	476	465	463	468	468	206	0	0	0	2,769	140	527	0.19
30S/25E-07G01	0	0	224	478	469	469	483	478	208	0	0	0	2,809	200	764	0.27
30S/25E-07P01	0	0	12	229	217	202	197	191	83	0	0	0	1,131	310	477	0.42
30S/25E-07R01	0	0	135	267	254	235	231	223	97	0	0	0	1,442	340	666	0.46
30S/25E-08F01	0	0	150	315	310	298	301	300	132	0	0	0	1,806	390	957	0.53
30S/25E-08J01	0	0	171	282	267	242	233	220	102	0	0	0	1,517	140	289	0.19
30S/25E-08P01	0	0	52	281	233	231	227	217	93	0	0	0	1,334	200	363	0.27
30S/25E-09A01	0	0	30	320	216	291	289	266	130	0	0	0	1,542	300	629	0.41
30S/25E-09J01	0	0	135	294	358	326	320	303	85	0	0	44	1,865	320	811	0.43
30S/25E-09L01	0	0	189	333	334	305	312	307	134	0	0	71	1,985	320	863	0.43
30S/25E-10K01	0	0	0	0	0	0	0	0	0	0	0	0	0	290	0	
30S/25E-11A01	0	0	0	0	0	286	303	296	128	0	0	78	1,091	127	188	0.17
30S/25E-11C01	0	0	0	0	0	0	0	0	0	0	0	79	79	530	57	0.72
30S/25E-11E01	0	0	0	0	0	0	0	0	0	0	0	13	13	270	5	0.37
30S/25E-11L01	0	0	0	0	0	0	0	0	0	0	0	0	0	285	0	
30S/25E-11N01	0	0	0	0	0	0	0	0	0	0	0	56	56	380	29	0.52
30S/25E-11Q01	0	0	0	0	0	0	0	0	0	0	0	0	0	350	0	
30S/25E-12C01	0	0	0	0	0	0	0	0	0	0	0	0	0	450	0	
30S/25E-13L01	0	0	0	0	0	0	0	0	0	0	0	0	0	140	0	
30S/25E-14E01	0	0	0	0	0	0	230	539	243	0	0	144	1,156	330	518	0.45
30S/25E-14J01	0	0	169	438	433	425	432	425	196	0	0	100	2,618	90	320	0.12
30S/25E-14N01	0	0	133	316	321	298	281	229	118	0	0	68	1,764	130	312	0.18
30S/25E-14Q01	0	0	0	0	0	0	0	0	0	0	0	0	0	94	0	
30S/25E-14R01	0	0	37	289	289	272	274	266	128	0	0	66	1,621	140	308	0.19
30S/25E-15B01	0	0	183	292	318	319	322	307	0	0	0	0	1,741	230	544	0.31
30S/25E-15C01	0	0	183	311	319	323	329	317	0	0	0	0	1,782	270	654	0.37
30S/25E-15N01	0	0	38	230	176	123	0	0	0	0	0	39	606	170	140	0.23
30S/25E-15Q01	0	0	50	341	330	314	316	286	0	0	0	0	1,637	200	445	0.27
30S/25E-15R01	0	0	0	0	0	0	88	202	101	0	0	70	461	190	119	0.26

Kern Fan Monitoring Committee
Kern Water Bank
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd (tons)	TDS (tons/af)
30S/25E-16B01	0	0	0	0	303	335	307	278	140	0	0	0	1,363	180	333	0.24
30S/25E-16D01	0	0	0	0	447	397	383	358	153	0	0	0	1,738	280	661	0.38
30S/25E-16F01	0	0	75	274	278	270	273	267	117	0	0	0	1,554	310	655	0.42
30S/25E-16J01	0	0	0	0	200	181	183	173	86	0	0	53	876	170	202	0.23
30S/25E-16M01	0	0	0	0	0	0	340	393	182	0	0	109	1,024	200	278	0.27
30S/25E-16P01	0	0	168	293	276	284	295	285	134	0	0	75	1,810	210	517	0.29
30S/25E-16R01	0	0	170	283	254	241	236	214	0	0	0	0	1,398	180	342	0.24
30S/25E-17F01	0	0	134	285	280	269	271	269	118	0	0	0	1,626	270	597	0.37
30S/25E-17H01	0	0	0	0	670	701	656	702	324	0	0	172	3,225	250	1,096	0.34
30S/25E-17J01	0	0	0	0	713	697	629	672	309	0	0	159	3,179	170	734	0.23
30S/25E-17M01	0	0	0	0	0	0	0	0	0	0	0	0	0	190	0	
30S/25E-17P01	0	0	328	599	589	553	561	550	253	0	0	129	3,562	180	871	0.24
30S/25E-18A01	0	0	102	239	230	209	199	192	84	0	0	0	1,255	350	597	0.48
30S/25E-18C01	0	0	14	276	260	273	273	269	118	0	0	0	1,483	300	605	0.41
30S/25E-18K01	0	0	0	0	0	0	0	0	0	0	0	0	0	360	0	
30S/25E-18P01	0	0	0	336	383	389	371	397	172	0	0	91	2,139	350	1,017	0.48
30S/25E-18R01	0	0	0	292	342	338	344	340	148	0	0	82	1,886	210	538	0.29
30S/25E-19P01	0	0	0	0	0	0	0	0	0	0	0	0	0	1190	0	
30S/25E-20A01	0	0	232	442	428	432	442	437	189	0	0	89	2,691	240	878	0.33
30S/25E-20C01	0	0	252	433	404	430	437	425	184	0	0	0	2,565	170	593	0.23
30S/25E-20L01	0	0	281	513	508	475	480	469	202	0	0	113	3,041	290	1,199	0.39
30S/25E-21A02	0	0	178	303	277	236	227	215	67	0	0	66	1,569	170	363	0.23
30S/25E-21D01	0	0	346	590	575	532	534	519	225	0	0	126	3,447	200	937	0.27
30S/25E-21G01	0	0	205	382	115	375	382	378	77	0	0	88	2,002	190	517	0.26
30S/25E-23B01	0	0	0	0	0	0	0	0	0	0	0	0	0	120	0	
30S/25E-23H01	0	0	21	261	256	241	240	230	0	0	0	0	1,249	130	221	0.18
30S/25E-24J01	0	0	0	0	0	0	0	0	0	0	0	0	0	170	0	
30S/25E-36D01	0	0	0	0	0	284	349	183	0	0	0	0	816	230	255	0.31
30S/26E-06N01	0	0	0	0	0	0	0	304	58	0	0	95	457	480	298	0.65
30S/26E-07J01	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	
30S/26E-07N01	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	
30S/26E-18D01	0	0	0	0	0	0	0	0	0	0	0	0	0	170	0	
30S/26E-19M01	0	0	0	0	276	345	352	347	150	0	0	0	1,470	170	340	0.23
30S/26E-20L01	0	0	0	0	406	418	425	416	176	0	0	0	1,841	210	525	0.29
30S/26E-20N02	0	0	0	0	340	367	376	366	0	0	0	0	1,449	150	295	0.20
TOTAL	0	0	4,746	11,878	15,062	15,647	16,174	16,802	6,095	0	0	2,261	88,695	—	27,403	0.31
														TDS (tons/af) of recharged water*		0.18
														ratio of salt removed/salt loaded		1.8

* See "Salt Load Summary.xls" for determination of TDS of recharged water.

Kern Fan Monitoring Committee
Pioneer Property
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd (tons)	TDS (tons/af)
KCWA 6	0	0	99	351	346	316	325	321	138	138	14	0	2,048	240	668	0.33
KCWA 11	0	167	113	427	419	359	353	344	151	145	132	373	2,983	270	1,095	0.37
KCWA 12	0	0	124	316	284	246	250	235	110	0	0	0	1,565	310	659	0.42
KCWA 13	0	0	112	276	237	215	216	202	91	0	0	0	1,349	290	532	0.39
KCWA 14	0	0	0	0	10	404	404	391	169	164	239	276	2,057	270	755	0.37
KCWA 15	0	0	0	0	10	401	402	390	169	161	207	399	2,139	240	698	0.33
KCWA 16	0	0	0	0	7	403	405	397	172	170	245	436	2,235	278	845	0.38
KCWA 17	0	0	0	0	7	379	377	366	158	156	222	0	1,665	270	611	0.37
KCWA 18	0	0	0	0	22	413	418	412	178	174	44	347	2,008	200	546	0.27
KCWA 19	0	0	0	0	91	402	405	398	172	170	226	0	1,864	242	613	0.33
KCWA 20	0	0	0	0	91	406	409	401	173	168	43	0	1,691	216	496	0.29
KCWA 21	0	0	0	0	0	193	365	370	157	0	0	0	1,085	230	339	0.31
KCWA 22	0	0	0	0	0	20	403	397	166	0	0	0	986	170	228	0.23
KCWA 23	0	0	0	0	0	0	157	409	166	0	0	0	732	190	189	0.26
KCWA 24	0	0	0	0	0	0	150	390	159	0	0	0	699	170	161	0.23
REHAB 1	0	0	0	249	407	364	367	360	156	0	0	0	1,903	260	672	0.35
REHAB 2	0	0	0	260	425	374	379	371	161	0	0	0	1,970	260	696	0.35
REHAB 3	0	0	0	185	410	378	128	0	0	0	0	0	1,101	170	254	0.23
REHAB 4	0	0	0	183	403	374	236	81	0	0	0	0	1,277	130	226	0.18
REHAB 5	0	0	0	166	393	365	82	0	0	0	0	0	1,006	180	246	0.24
REHAB 6	0	0	35	340	360	288	125	0	0	0	0	0	1,148	175	273	0.24
3B1	0	0	0	0	110	33	181	245	51	0	0	0	620	190	160	0.26
4B1	0	0	0	77	168	191	106	162	33	0	0	0	737	220	220	0.30
4E1	0	0	0	0	0	0	49	132	46	0	0	0	227	230	71	0.31
4L1	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	
11D1	0	0	0	166	236	187	84	0	0	0	0	0	673	270	247	0.37
11P1	0	0	0	189	259	274	86	0	0	0	0	0	808	280	307	0.38
12D1	0	0	0	293	354	322	198	3	0	0	0	0	1,170	160	254	0.22
12N1	0	0	0	211	365	274	124	0	0	0	0	0	974	170	225	0.23
CBK 40	0	0	11	242	229	197	194	195	187	0	0	0	1,255	76	130	0.10
TOTAL	0	167	494	3,931	5,643	7,778	7,378	6,972	2,963	1,446	1,372	1,831	39,975	—	12,417	0.31
														TDS (tons/af) of recharged water*		0.14
														ratio of salt removed/salt loaded		2:3

* See "Salt Load Summary.xls" for determination of TDS of recharged water.

Kern Fan Monitoring Committee
All Projects
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd (tons)	TDS (tons/af)
11D1	0	0	0	166	236	187	84	0	0	0	0	0	673	270	247	0.37
11P1	0	0	0	189	259	274	86	0	0	0	0	0	808	280	307	0.38
12D1	0	0	0	293	354	322	198	3	0	0	0	0	1,170	160	254	0.22
12N1	0	0	0	211	365	274	124	0	0	0	0	0	974	170	225	0.23
3B1	0	0	0	0	110	33	181	245	51	0	0	0	620	190	160	0.26
4B1	0	0	0	77	168	191	106	162	33	0	0	0	737	220	220	0.30
4E1	0	0	0	0	0	0	49	132	46	0	0	0	227	230	71	0.31
4L1	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	
BK 1	0	0	148	345	339	318	322	237	0	221	141	0	2,071	150	422	0.20
BK 2	0	0	156	383	378	357	54	0	0	241	152	0	1,721	140	327	0.19
BK 3	0	0	160	372	367	278	362	278	0	229	139	0	2,185	150	445	0.20
BK 4	0	0	100	351	366	333	217	252	0	215	150	0	1,984	230	620	0.31
BK 5	0	0	88	331	352	335	353	267	0	209	138	0	2,073	160	451	0.22
BK 6	0	0	97	377	402	382	399	304	0	254	162	0	2,377	130	420	0.18
BK 7	0	0	0	0	0	461	470	244	0	0	0	0	1,175	228	364	0.31
BK 8	0	0	0	394	444	401	399	207	0	184	151	0	2,180	312	924	0.42
BK 9	0	0	0	0	0	0	0	0	0	0	0	0	0	173	0	
BK 10	0	0	0	0	87	410	406	211	0	0	0	0	1,114	240	363	0.33
BK 11	0	0	0	0	106	356	370	183	0	0	0	0	1,015	214	295	0.29
BK 12	0	0	0	0	0	153	363	189	0	0	0	0	705	202	194	0.27
BM 1	0	0	100	321	322	308	321	200	330	328	122	0	2,352	110	352	0.15
BM 3	0	0	57	263	279	267	281	174	245	291	109	0	1,966	120	321	0.16
CBK 40	0	0	11	242	229	197	194	195	187	0	0	0	1,255	76	130	0.10
KCWA 1	0	152	63	246	295	294	295	287	125	0	0	0	1,757	250	597	0.34
KCWA 10	0	0	90	348	338	299	297	289	126	0	0	0	1,787	280	680	0.38
KCWA 11	0	167	113	427	419	359	353	344	151	145	132	373	2,983	270	1,095	0.37
KCWA 12	0	0	124	316	284	246	250	235	110	0	0	0	1,565	310	659	0.42
KCWA 13	0	0	112	276	237	215	216	202	91	0	0	0	1,349	290	532	0.39
KCWA 14	0	0	0	0	10	404	404	391	169	164	239	276	2,057	270	755	0.37
KCWA 15	0	0	0	0	10	401	402	390	169	161	207	399	2,139	240	698	0.33

Kern Fan Monitoring Committee
All Projects
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd (tons)	TDS (tons/af)
KCWA 16	0	0	0	0	7	403	405	397	172	170	245	436	2,235	278	845	0.38
KCWA 17	0	0	0	0	7	379	377	366	158	156	222	0	1,665	270	611	0.37
KCWA 18	0	0	0	0	22	413	418	412	178	174	44	347	2,008	200	546	0.27
KCWA 19	0	0	0	0	91	402	405	398	172	170	226	0	1,864	242	613	0.33
KCWA 2	0	50	83	326	323	300	300	249	132	0	0	0	1,763	170	407	0.23
KCWA 20	0	0	0	0	91	406	409	401	173	168	43	0	1,691	216	496	0.29
KCWA 21	0	0	0	0	0	193	365	370	157	0	0	0	1,085	230	339	0.31
KCWA 22	0	0	0	0	0	20	403	397	166	0	0	0	986	170	228	0.23
KCWA 23	0	0	0	0	0	0	157	409	166	0	0	0	732	190	189	0.26
KCWA 24	0	0	0	0	0	0	150	390	159	0	0	0	699	170	161	0.23
KCWA 3	0	159	94	320	316	296	292	292	125	0	0	0	1,894	200	515	0.27
KCWA 4	0	46	103	343	324	205	307	301	132	0	0	0	1,761	150	359	0.20
KCWA 5	0	131	95	333	289	259	278	298	132	0	0	0	1,815	150	370	0.20
KCWA 6	0	0	99	351	346	316	325	321	138	138	14	0	2,048	240	668	0.33
KCWA 7	0	0	0	378	415	301	301	343	146	0	0	0	1,884	210	538	0.29
KCWA 8	0	191	101	375	357	335	335	327	142	0	0	0	2,163	290	853	0.39
KCWA 9	0	0	0	336	380	335	347	340	146	0	0	0	1,884	210	538	0.29
Olcese 1	0	0	44	455	421	346	329	318	297	0	0	0	2,210	210	631	0.29
Olcese 2	0	0	42	450	427	360	351	341	306	0	0	0	2,277	170	526	0.23
Olcese 3	0	0	24	380	328	417	405	392	345	0	0	0	2,291	200	623	0.27
Olcese 4	0	0	26	466	489	467	465	453	392	0	0	0	2,758	200	750	0.27
Olcese 5	0	0	26	461	489	469	449	454	393	0	0	0	2,741	220	820	0.30
Olcese 6	0	0	12	418	457	444	442	433	375	0	0	0	2,581	200	702	0.27
Olcese 7	0	0	41	423	432	359	382	413	354	0	0	0	2,404	210	686	0.29
Olcese 8	0	0	35	369	398	379	395	392	333	0	0	0	2,301	160	500	0.22
REHAB 1	0	0	0	249	407	364	367	360	156	0	0	0	1,903	260	672	0.35
REHAB 2	0	0	0	260	425	374	379	371	161	0	0	0	1,970	260	696	0.35
REHAB 3	0	0	0	185	410	378	128	0	0	0	0	0	1,101	170	254	0.23
REHAB 4	0	0	0	183	403	374	236	81	0	0	0	0	1,277	130	226	0.18
REHAB 5	0	0	0	166	393	365	82	0	0	0	0	0	1,006	180	246	0.24

Kern Fan Monitoring Committee
All Projects
Recovery Summary and Salt Content

Quantities in acre-feet except where noted

Year: 2001

WELL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	TDS (mg/l)	Salt Recoverd (tons)	TDS (tons/af)
REHAB 6	0	0	35	340	360	288	125	0	0	0	0	0	1,148	175	273	0.24
30S/24E-24A01	0	0	0	41	137	185	186	182	77	0	0	16	824	650	728	0.88
30S/25E-03Q01	0	0	0	0	0	0	8	370	168	0	0	0	546	300	223	0.41
30S/25E-04L01	0	0	126	389	396	376	381	372	0	0	0	0	2,040	250	693	0.34
30S/25E-05K01	0	0	0	155	410	392	398	390	0	0	0	0	1,745	131	311	0.18
30S/25E-06K01	0	0	223	476	465	463	468	468	206	0	0	0	2,769	140	527	0.19
30S/25E-07G01	0	0	224	478	469	469	483	478	208	0	0	0	2,809	200	764	0.27
30S/25E-07P01	0	0	12	229	217	202	197	191	83	0	0	0	1,131	310	477	0.42
30S/25E-07R01	0	0	135	267	254	235	231	223	97	0	0	0	1,442	340	666	0.46
30S/25E-08F01	0	0	150	315	310	298	301	300	132	0	0	0	1,806	390	957	0.53
30S/25E-08J01	0	0	171	282	267	242	233	220	102	0	0	0	1,517	140	289	0.19
30S/25E-08P01	0	0	52	281	233	231	227	217	93	0	0	0	1,334	200	363	0.27
30S/25E-09A01	0	0	30	320	216	291	289	266	130	0	0	0	1,542	300	629	0.41
30S/25E-09J01	0	0	135	294	358	326	320	303	85	0	0	44	1,865	320	811	0.43
30S/25E-09L01	0	0	189	333	334	305	312	307	134	0	0	71	1,985	320	863	0.43
30S/25E-10K01	0	0	0	0	0	0	0	0	0	0	0	0	0	290	0	
30S/25E-11A01	0	0	0	0	0	286	303	296	128	0	0	78	1,091	127	188	0.17
30S/25E-11C01	0	0	0	0	0	0	0	0	0	0	0	79	79	530	57	0.72
30S/25E-11E01	0	0	0	0	0	0	0	0	0	0	0	13	13	270	5	0.37
30S/25E-11L01	0	0	0	0	0	0	0	0	0	0	0	0	0	285	0	
30S/25E-11N01	0	0	0	0	0	0	0	0	0	0	0	56	56	380	29	0.52
30S/25E-11Q01	0	0	0	0	0	0	0	0	0	0	0	0	0	350	0	
30S/25E-12C01	0	0	0	0	0	0	0	0	0	0	0	0	0	450	0	
30S/25E-13L01	0	0	0	0	0	0	0	0	0	0	0	0	0	140	0	
30S/25E-14E01	0	0	0	0	0	0	230	539	243	0	0	144	1,156	330	518	0.45
30S/25E-14J01	0	0	169	438	433	425	432	425	196	0	0	100	2,618	90	320	0.12
30S/25E-14N01	0	0	133	316	321	298	281	229	118	0	0	68	1,764	130	312	0.18
30S/25E-14Q01	0	0	0	0	0	0	0	0	0	0	0	0	0	94	0	
30S/25E-14R01	0	0	37	289	289	272	274	266	128	0	0	66	1,621	140	308	0.19
30S/25E-15B01	0	0	183	292	318	319	322	307	0	0	0	0	1,741	230	544	0.31

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30S/25E-15C01	0	0	183	311	319	323	329	317	0	0	0	0	1,782	270	654	0.37
30S/25E-15N01	0	0	38	230	176	123	0	0	0	0	0	39	606	170	140	0.23
30S/25E-15Q01	0	0	50	341	330	314	316	286	0	0	0	0	1,637	200	445	0.27
30S/25E-15R01	0	0	0	0	0	0	88	202	101	0	0	70	461	190	119	0.26
30S/25E-16B01	0	0	0	0	303	335	307	278	140	0	0	0	1,363	180	333	0.24
30S/25E-16D01	0	0	0	0	447	397	383	358	153	0	0	0	1,738	280	661	0.38
30S/25E-16F01	0	0	75	274	278	270	273	267	117	0	0	0	1,554	310	655	0.42
30S/25E-16J01	0	0	0	0	200	181	183	173	86	0	0	53	876	170	202	0.23
30S/25E-16M01	0	0	0	0	0	0	340	393	182	0	0	109	1,024	200	278	0.27
30S/25E-16P01	0	0	168	293	276	284	295	285	134	0	0	75	1,810	210	517	0.29
30S/25E-16R01	0	0	170	283	254	241	236	214	0	0	0	0	1,398	180	342	0.24
30S/25E-17F01	0	0	134	285	280	269	271	269	118	0	0	0	1,626	270	597	0.37
30S/25E-17H01	0	0	0	0	670	701	656	702	324	0	0	172	3,225	250	1,096	0.34
30S/25E-17J01	0	0	0	0	713	697	629	672	309	0	0	159	3,179	170	734	0.23
30S/25E-17M01	0	0	0	0	0	0	0	0	0	0	0	0	0	190	0	
30S/25E-17P01	0	0	328	599	589	553	561	550	253	0	0	129	3,562	180	871	0.24
30S/25E-18A01	0	0	102	239	230	209	199	192	84	0	0	0	1,255	350	597	0.48
30S/25E-18C01	0	0	14	276	260	273	273	269	118	0	0	0	1,483	300	605	0.41
30S/25E-18K01	0	0	0	0	0	0	0	0	0	0	0	0	0	360	0	
30S/25E-18P01	0	0	0	336	383	389	371	397	172	0	0	91	2,139	350	1,017	0.48
30S/25E-18R01	0	0	0	292	342	338	344	340	148	0	0	82	1,886	210	538	0.29
30S/25E-19P01	0	0	0	0	0	0	0	0	0	0	0	0	0	1190	0	
30S/25E-20A01	0	0	232	442	428	432	442	437	189	0	0	89	2,691	240	878	0.33
30S/25E-20C01	0	0	252	433	404	430	437	425	184	0	0	0	2,565	170	593	0.23
30S/25E-20L01	0	0	281	513	508	475	480	469	202	0	0	113	3,041	290	1,199	0.39
30S/25E-21A02	0	0	178	303	277	236	227	215	67	0	0	66	1,569	170	363	0.23
30S/25E-21D01	0	0	346	590	575	532	534	519	225	0	0	126	3,447	200	937	0.27
30S/25E-21G01	0	0	205	382	115	375	382	378	77	0	0	88	2,002	190	517	0.26
30S/25E-23B01	0	0	0	0	0	0	0	0	0	0	0	0	0	120	0	
30S/25E-23H01	0	0	21	261	256	241	240	230	0	0	0	0	1,249	130	221	0.18

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30S/25E-24J01	0	0	0	0	0	0	0	0	0	0	0	0	0		0	
30S/25E-36D01	0	0	0	0	0	284	349	183	0	0	0	0	816	230	255	0.31
30S/26E-06N01	0	0	0	0	0	0	0	304	58	0	0	95	457	480	298	0.65
30S/26E-07J01	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	
30S/26E-07N01	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	
30S/26E-18D01	0	0	0	0	0	0	0	0	0	0	0	0	0	170	0	
30S/26E-19M01	0	0	0	0	276	345	352	347	150	0	0	0	1,470	170	340	0.23
30S/26E-20L01	0	0	0	0	406	418	425	416	176	0	0	0	1,841	210	525	0.29
30S/26E-20N02	0	0	0	0	340	367	376	366	0	0	0	0	1,449	150	295	0.20
TOTAL	0	896	7,025	25,373	30,625	33,649	33,889	32,442	13,634	3,618	2,636	4,122	187,859	—	55,412	0.29
														TDS (tons/af) of recharged water*		0.16
														ratio of TDS of recovered water to recharged water		1.8

* See "Salt Load Summary.xls" for determination of TDS of recharged water.